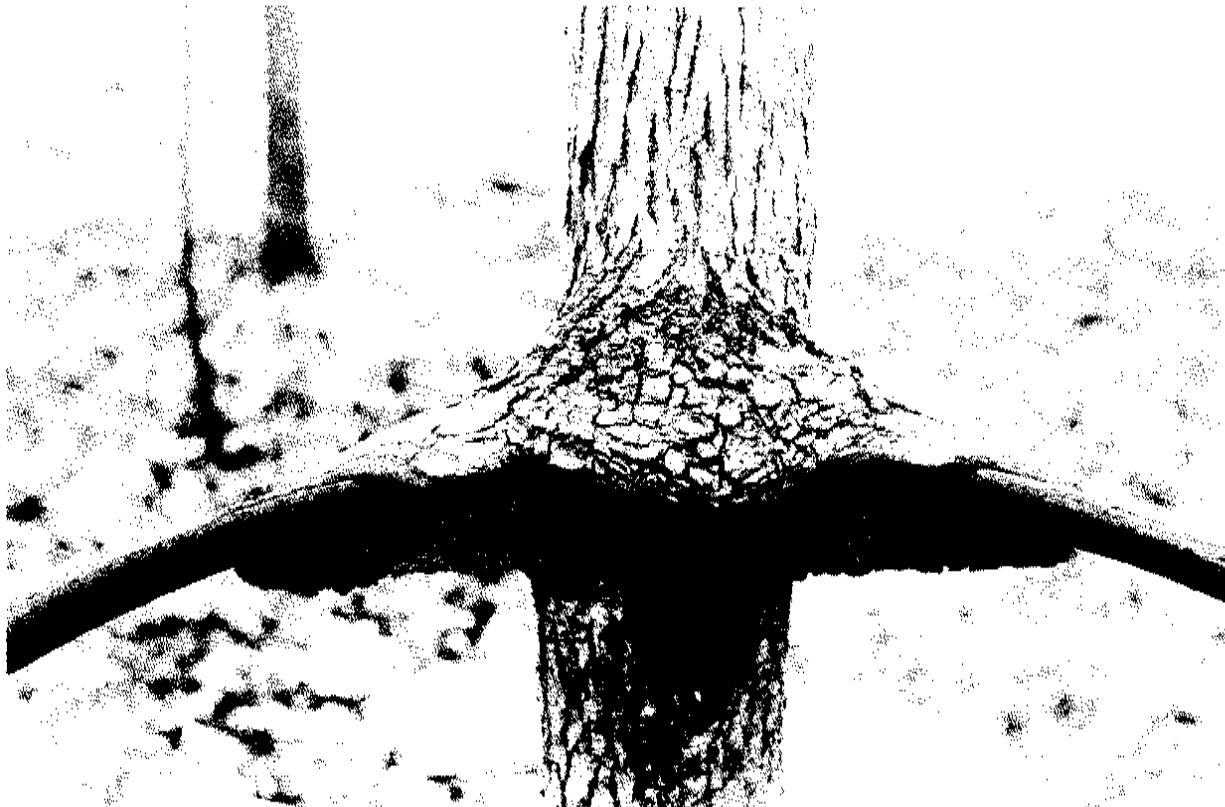


Phase I and Phase II archaeological and historical investigations in connection with
Scarborough Road from U. S. Route 13 (duPont Highway) to State College Road,
Dover, Kent County, Delaware



A Community on McKee Road

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Federal Highway Administration



Delaware Department of Transportation

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Delaware Department of Transportation Archaeological Series Number 109

1995

ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS FOR SCARBOROUGH ROAD
FROM U.S. ROUTE 13 (DUPONT HIGHWAY) TO STATE COLLEGE ROAD
DOVER, KENT COUNTY, DELAWARE:

A COMMUNITY ON MCKEE ROAD

DELAWARE DEPARTMENT OF TRANSPORTATION ARCHAEOLOGY SERIES NUMBER 109
DELAWARE DEPARTMENT OF TRANSPORTATION PROJECT 83-012-01 FHWA FEDERAL AID PROJECT M 1036 (1)

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SUBMITTED TO
DELAWARE DEPARTMENT OF STATE
DIVISION OF HISTORICAL AND CULTURAL AFFAIRS
STATE HISTORIC PRESERVATION OFFICE

AND

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

PREPARED FOR
DELAWARE DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
LOCATION AND ENVIRONMENTAL STUDIES OFFICE

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1995

DOCUMENT CONTROL NUMBER:
55-03/95/3/29

ABSTRACT

This is a report of Phase I and Phase II archaeological and historical investigations in connection with proposed construction of a new road to be known as Scarborough Road, between McKee Road and Route 13 in the City of Dover, Delaware. The purpose of this investigation was to assess the significance of cultural resources in the McKee Road area that might be impacted by construction of the proposed road.

Four resources were identified that the consultants believe are eligible for listing in the National Register of Historic Places.

The proposed road will pass through a farm that has been developed and cultivated by one family for more than a century. Emory Scotten and his descendants converted a marginal tenant farm into a prosperous owner-occupied agribusiness operation. The buildings they constructed, and the machinery they used, during the past century for their livestock, poultry, and timber operations still survive in a high state of preservation.

At the point where the proposed road will cross the valley of St. Jones River, a deeply stratified prehistoric site was identified. The level of investigation was Phase I, location and identification. The approximate extent of the deepest part of the site was identified.

At its intersection with McKee Road, the proposed road will destroy most of a site that has been identified through documents as the residence, before 1838, of a free black. Surface collection, trenching, and chemical analysis confirmed that subsurface remains of the toft still exist.

On the west side of McKee Road is a group of houses, the remains of a settlement of Native American descendants who settled here during the last decades of the nineteenth century. Even though the houses are derelict and the community has changed character, considerable survives, both above and below grade. The agricultural fields remain untouched and potentially productive of information. A test excavation demonstrated subsurface integrity.

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ACKNOWLEDGMENTS

This project could not have been accomplished without the assistance of the landowners and their representatives. Edward Voshell, who cultivates the Ford farm, and John Donato, supervisor of the physical plant at Del Tech, greatly facilitated the work, which must have caused them considerable discomfort.

For reviewing parts of the manuscript, we acknowledge with deep appreciation the assistance of two legends in the discipline of industrial archæology, Edward S. Rutsch of Historic Conservation and Interpretation, Inc., and Robert M. Vogel, formerly of the Smithsonian Institution.

At the Division of Highways, Raymond D. Richter, Assistant Director, Preconstruction; Joseph T. Wutka, Jr., Location Studies and Environmental Engineer; Therese M. Fulmer, Environmental Manager; Kevin Cunningham, Archæologist; Tim O'Brien, Photographer; Carol L. Kates, Secretary; Michael Hahn, Environmental Planner, and Joanna Likens, Project Scheduling and Support.

From the Federal Highway Administration, John J. Gilbert, Division Administrator.

At the Division of Historical and Cultural Affairs, Daniel R. Griffith, Director and State Historic Preservation Officer; Joan Larrivee, Deputy State Historic Preservation Officer, Alice Guerrant, archæologist, Stephen Del Sordo, historian, and Gwenn Davis Coffin, archæologist.

At the University of Delaware Center for Archæological Research, Jay F. Custer, Keith Doms, Doug Kellogg, and Lu Ann De Cunzo.

For Heite Consulting, Sam Cammisa, George Keeler, Greg Bailey, and John Rhoades.

From the Division of Support Operations: Bill Yerkes, Graphics and Printing Manager, John Bordley, Printer III, Dorothy Hutchins, Photo Reproduction Technician, Jim Sylvester, Printer III, Ed Wilkinson, Printer III.

1. INTRODUCTION

THE DELAWARE DEPARTMENT OF Transportation proposes to build a new road connecting U. S. Route 13 with McKee Road, a short distance south of Denney Road in Dover, Kent County. The new road, to be known as Scarborough Road, has been known colloquially as the new Denney Road.

As currently proposed, the right-of-way for this four-lane road will encompass a path 175 feet wide, and a little over a mile long, shown as a dashed line on the maps and plans herewith. At Route 13 and at McKee Road, the right-of-way will widen to accommodate intersections and turn lanes.

East of St. Jones River, the proposed road will cross the campus of Delaware Technical and Community College. After crossing the river, the new road will cross a privately-owned farm on the west bank

THE CURRENT INVESTIGATION

In order to comply with Section 106 of the National Historic Preservation Act of 1966 as amended, and other regulations, the Department of Transportation engaged Edward Heite to conduct Phase I and Phase II cultural resources investigations in the proposed corridor. The consultant in turn engaged Cara L. Blume as consultant to analyse the prehistoric aspects. The project area was generally the proposed rights-of-way and certain adjacent areas that might be impacted.

Work on the present cultural resources project was conducted between October 1989 and October 1992, under the general supervision of Kevin Cunningham, archaeologist for the Delaware Department of Transportation.

Purpose of a Phase I survey is to identify all cultural resources that might be affected by the project, but to investigate neither their extent nor their significance.

Phase II surveys assess the extent, integrity, and probable eligibility for listing in the National Register of Historic Places, of sites identified in the first survey.

The 1989 Phase I work was conducted by Heite personally, working alone, beginning October 9, 1989. Blume joined the project when Phase II work began in 1990. The 1990 fieldwork was assisted by members of the Kent County Archaeological Society. Phase I ended in November 1990 with the recording of machine-cut trenches. In 1991 and 1992, Phase II work was performed by Heite and Blume, assisted by Cherie A. Clark, with the help of a field crew consisting of George Keeler, Sam Cammisa, Aaron Jones, Greg Bailey, and Trent Collins.

CONSTRAINTS

There were few constraints on survey; for the most part conditions were ideal. Soybeans, high grass, and mosquitoes proved to be temporary annoyances, but not impediments.

At the Route 13 end, the disturbance caused by a trailer sales yard confined the survey. After the trailers were removed, the site was trenched and searched for buried features.

It was not possible to use dry-land methods to investigate the drowned historic valley of Fork Branch. It should be noted, however, that prehistoric settlement is unlikely to have taken place in the poorly drained soils of the floodplain, and historic use of this area is also likely to have been extremely limited.

EARLIER PHASES OF THIS SURVEY

An earlier report (Heite and Blume 1992) chronicled Phase I and Phase II surveys in a broad corridor. Two alignments were investigated at that time, and several sites were identified on both sides of the river.

In 1992, the Department engaged the authors to examine a new version of the southern alignment. Redefinition of the southern alignment, and refinement of the plans, prompted additional cultural resource investigations.

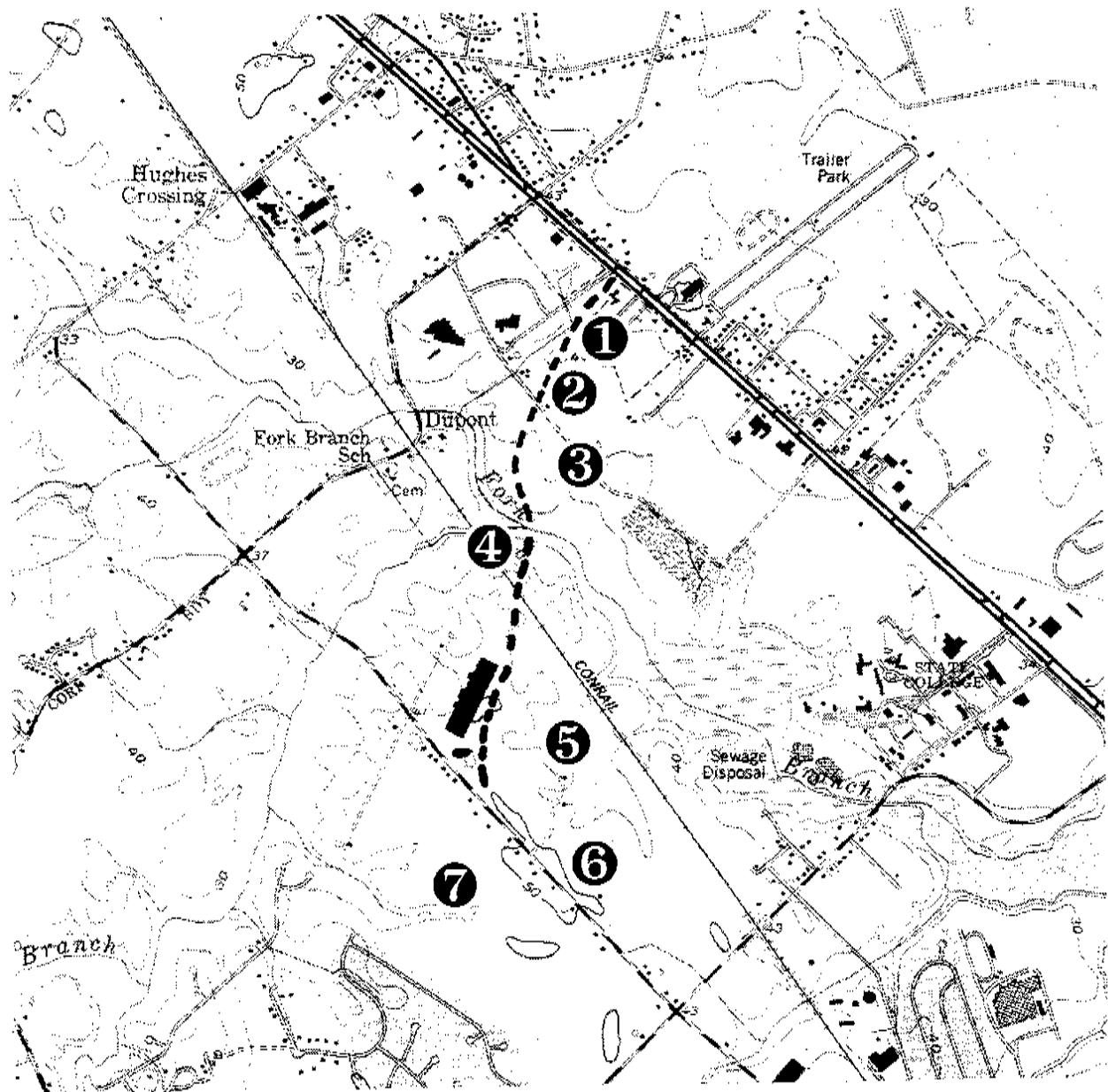


Figure 1
Project Area

Detail of USGS Dover quadrangle, 1956, 1981



Alignment centerline is shown as dashed line. Study areas are numbered.
1. Trailer Sales 2. Athletic Field 3. White Marsh 4. Ford Farm prehistoric site
5. Scotten-Ford agricultural complex 6. Nathan Williams Site 7. Mosley Historic District

▲ North

Scale: One Mile

East of the river, it was determined that no sites eligible for the National Register would be impacted by the proposed construction of the selected alignment.

West of the river, the original survey identified several potentially significant historic resources that would be impacted the selected alignment.

Two properties not included in the original survey were identified for Phase I testing in the present project. These were the farmsteads west of McKee Road and the section of the Ford Farm prehistoric site complex that lies in the selected alignment.

TESTS AT RIVER CROSSING

During the first survey along this corridor, the authors identified two large and significant stratified prehistoric sites, Blueberry Hill (7K-C-107) and Ford Farm (7K-C-386, locus D). These two resources were interpreted as nodes in a related series of sites on the bluffs along the west bank of the river.

Current plans call for a bridge to be built between these two locations, prompting further test excavations at the Phase I level. The purpose of these test excavations was to determine if a stratified site existed here. For the sake of convenience, this location was denominated Ford Farm locus E, part of 7K-C-386).

During preliminary walkovers, prehistoric stone tools were found in the proposed bridge location, thrown up by recreational use of the area.

All-terrain-vehicle enthusiasts have carved trails through the project area, part of which remains wooded. Between the dirt bike and ATV tracks, there was a very high probability that stratified undisturbed prehistoric remains survived.

Because the nearby Blueberry Hill site is deeply stratified, deep testing was indicated at the newly-proposed crossing point. At least five test units, each one meter square, were to be opened to a depth below the lowest prospective human occupation level. In fact, six units were opened and evaluated by a soil specialist.

SCOTTEN-FORD TOFT

For a century, the farm west of the river has been home to a single family, whose progenitor built the farmhouse and outbuildings that still stand. The proposed new road alignment passes near the toft. The apparent integrity of the original house and its outbuildings indicated that the toft may be eligible for the National Register.

The proposed new alignment will pass near the site of a "portable" sawmill, which actually was a permanent installation. This mill site was identified in the earlier study as potentially eligible under criterion D, a well-preserved industrial archaeological site capable of expanding our knowledge of the operation of country sawmills.

A purpose of the current study was to determine if the sawmill site possesses sufficient integrity to be nominated independently or as a contributing element of a larger nomination for the farm. The mill ruins were cleared of underbrush and trash, then mapped and photographed.

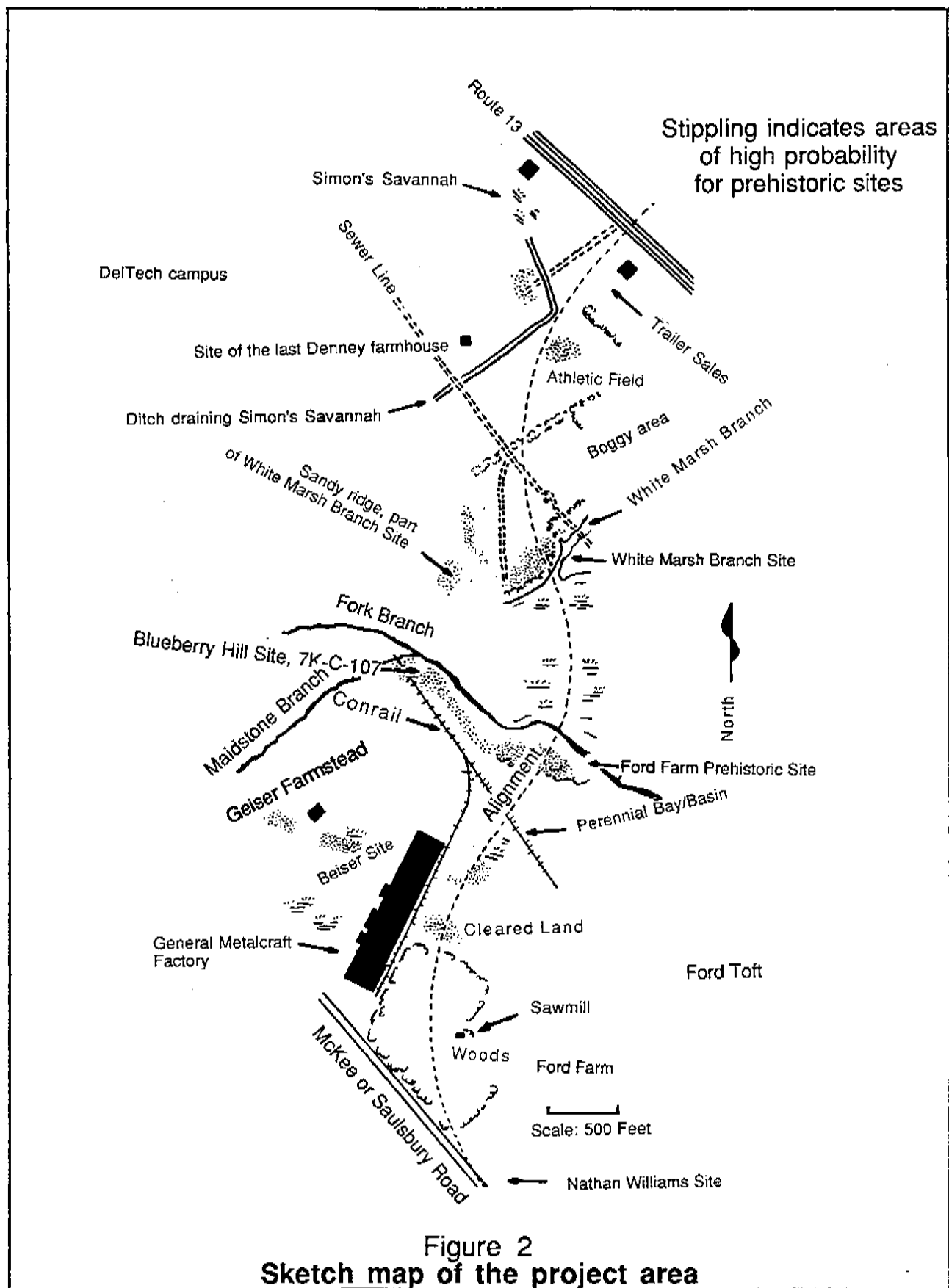
Between the sawmill and McKee Road is a woodlot, mapped as Fallsington soil, most of which would be affected by the proposed alignment. This type of area is considered a low-probability locus for prehistoric occupations. The only expected historic-period activities would be logging and trash disposal.

The woodlot was checked by walkover survey, but was not subjected to a subsurface survey because of its low likelihood of containing sites. The woodlot boundaries almost exactly coincide with the Fallsington soil, a poorly-drained type that supports hardwood forests but little else.

The history and architecture of the house, outbuildings, and sawmill were recorded, so that a determination of eligibility could be formulated. Eventually the toft, croft, and sawmill were included in the final determination of eligibility.

NATHAN WILLIAMS SITE

Near the point where the proposed alignment meets McKee Road is the documented location of the toft and a tract of about 11 acres that is known to have been occupied by Nathan Williams, a free black, before the Civil War.



Physical evidence found on the surface of the plowed field during the earlier survey (Heite and Blume 1992:55) attests to the presence of nineteenth-century cultural remains, catalogued as Excavation Register 3. Examination of the plowzone during that survey provided a rough determination of site boundaries, apparently coincident with a slight topographic rise.

Because tenant houses frequently were sited near roads, the house site itself could have been lost to earlier road improvements. However, this site belongs to a poorly documented class, ante bellum free blacks who were not freeholders, and excavation of any surviving part of the toft could therefore be expected to yield significant information. Antebellum free black tenants are difficult to identify in connection with archaeological sites, because recorded public land records rarely identify tenants. This site is thus potentially more valuable than either slave sites or the homes of black freeholders.

The site had been identified in the first survey, but its integrity and limits had not been defined. For a determination of eligibility, this information is essential. In order to test integrity and limits, a Phase II controlled surface collection was conducted and a test trench was cut with a Gradall and the features within it were mapped.

MOSLEY COMMUNITY STUDY

Changes to the existing McKee Road between College Road and the proposed intersection with Scarborough Road may have an impact on the historic Mosley community on the west side of the road, facing the Ford Farm.

The tract was developed during the final two decades of the nineteenth century, when the Mosley family began subdividing a farm, selling lots to closely related persons of the so-called "moor" ethnic group. Some history of these people was reported in Louise Heite's genealogical, historical, and archaeological survey of the duPont Station community (Heite and Heite 1985).

A house from the project area is now the centerpiece of the collection at the

Delaware Agricultural Museum, where considerable research effort has been expended to reconstruct its history and the story of the family that built and occupied it. In the course of this research, physical evidence contained in the fabric of the house has contributed significantly to both scholarly and popular knowledge of nineteenth-century Delaware farmlife.

Research in connection with museum restoration and interpretation has produced information about land use on the original site, including oral history that points to such potentially important archaeological data as locations of wells and privies. According to museum staff, on-site archaeological investigation would contribute significantly to their knowledge of the people who lived in the house. The original site has not been changed since the house was moved. Such important landmark features as yard trees, shrubbery, and fence lines still are easily discerned.

The original site of the removed house is therefore potentially eligible for listing in the National Register under criterion D, but it is not in the path of any currently-proposed construction. A small, two-square-meter, test confirmed that subsurface remains of the house foundations have survived.

In order to locate, identify, and evaluate cultural resources that might be found in the project area west of McKee Road, the Department authorized an investigation, including mapping known existing and former features potentially impacted by the proposed right-of-way, together with an ownership history and a culture history. This investigation was designed to meet the requirements of a Phase II evaluation and result in a potential nomination to the National Register of Historic Places.

The houses were evaluated for their potential contribution to defining a moor ethnic context as well as the context of historical agriculture. However, these specimens represent such a small sample that broader off-site survey information would be necessary to identify characteristics that might define a moor property type, if one can be shown to exist.

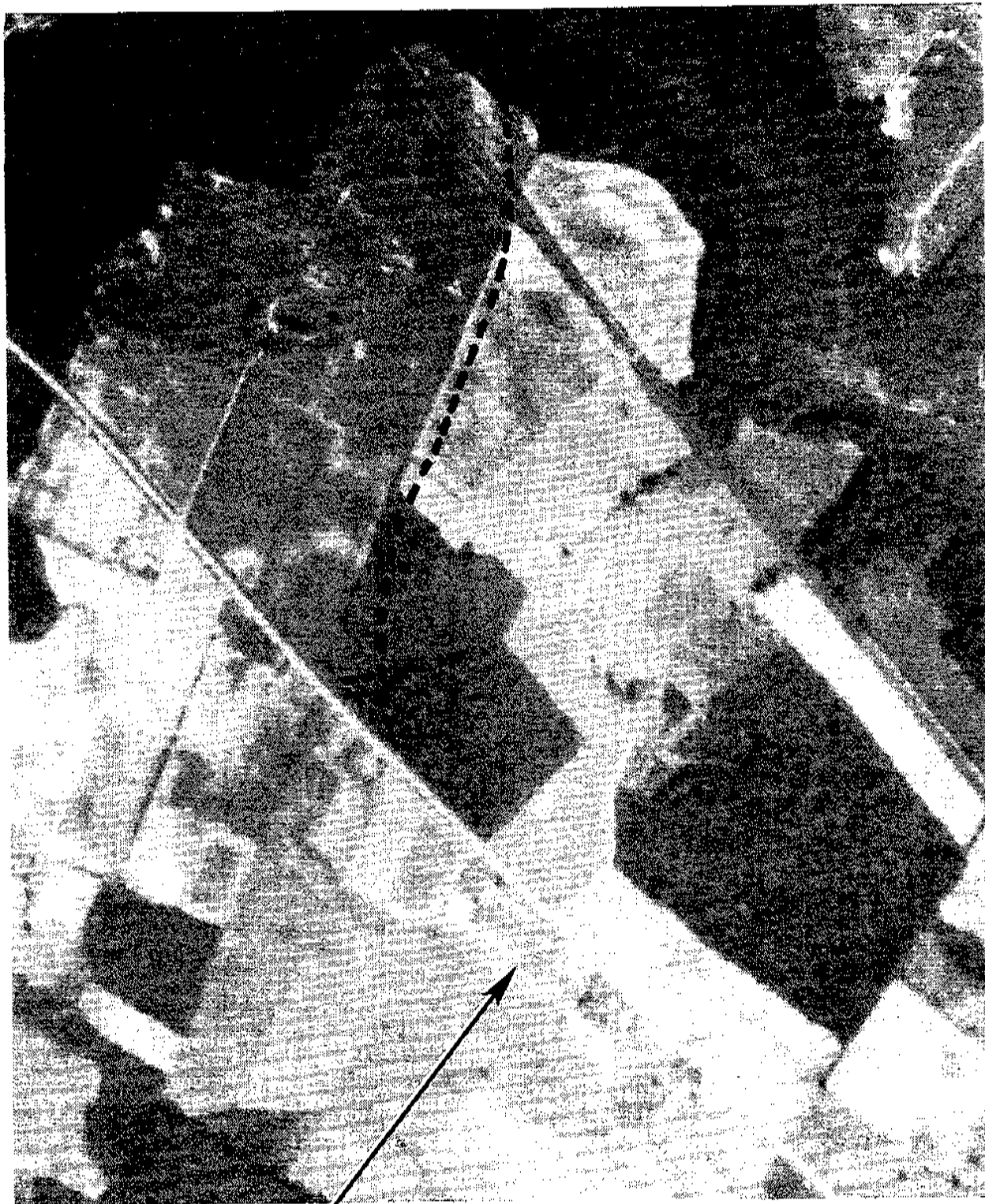


Plate 1
Detail of the 1937 aerial photograph of the project area
Dashed line represents the alignment west of St. Jones River. The now-demolished Robert Carney House can be seen opposite the Scotten-Ford driveway (arrow).

GEOGRAPHICAL LOCATION

The project area lies astride the main head stream of St. Jones River, which flows through a wooded freshwater swamp at this point (FIGURE 2). Much of the swampland has developed during the past three centuries at the head of a mill impoundment, but there are considerable natural wetlands in the floodplain. It lies on the eastern perimeter of the Mid-Peninsular Drainage Zone as defined by Custer and Galasso (1983:5) in their prehistoric survey of the valley.

SOILS

Soil type analysis is an important tool for archaeologists working in the prehistoric period. Prehistoric people did not classify soils, but they were drawn to places with certain cover and drainage conditions that today's soil scientists have quantified. Archaeologists can use these scientifically-described soil types to identify those places that would have provided suitable ground cover for prehistoric people.

Soils along this alignment belong to the Sassafras-Fallsington Association, "dominantly level to gently sloping, well-drained and poorly drained soils that have a moderately permeable subsoil of sandy loam to sandy clay loam; on uplands" (USDA SCS 1971). Most of the soils in the project area are mapped as Sassafras or Fallsington. Evesboro soils occur as a minority member of the association (FIGURE 3).

Sassafras soils are historically considered prime agricultural land, although the portion northeast of Fork Branch has not been farmed since the college and technical high school were built, nearly twenty years ago. Open ground west of the river was in soybeans, rye, and corn at the time of the survey.

Evesboro soils are loamy sands, and may be of æolian origin. Their native vegetation consists primarily of hardwoods. Unless they are treated with lime, Evesboro soils are considered extremely acid for agricultural purposes

ENVIRONMENT AND SITE LOCATION

Several natural and manmade features of the environment are culturally significant.

Typically for this region, the most significant features relate to drainage or the lack thereof.

The right-of-way crosses through or near several low, wet depressions called "bay-basin" features that have been identified as culturally significant. Immediately northwest of the north end of the proposed road is a drained swamp known in Colonial times as "Simon's Savannah" after Simon Hiron, the first settler and patentee. The savannah, or bog, has been drained by a substantial ditch that currently separates the main DelTech campus from the athletic field. Cultural implications of Simon's Savannah include possible association with a tannery, and a possible prehistoric procurement site.

On the northeast bank of Fork Branch, the right-of-way crosses the mouth of White Marsh Branch, which was converted into a drainage ditch during the nineteenth century. At the mouth of this ditch, on the southern alignment, is a high-probability area for prehistoric occupation outside the right-of-way.

The southernmost part of the southern alternative, next to McKee Road, is a low-lying poorly-drained woodland that has never been completely cleared. It is unlikely that prehistoric settlement occurred in this area. Remains of a sawmill and of roads and boundary ditches are, however, visible in the woods. Fallsington soil dominates.

Custer (1984:52) has stated that prehistoric people of all periods located hunting camps at junctions of large and small stream terraces and near game-attractive areas such as bogs and swamps that characterize the project area.

Upper drainage areas, such as this, were exploited by prehistoric people primarily as places for food-gathering. As larger and more permanent settlements began to develop, later in the prehistoric period, they were located downstream, near the edge of the tidal marshes and the saltwater fisheries.

Historic farmers valued high, well-drained fields of sandy soil, which are abundant in the project area.

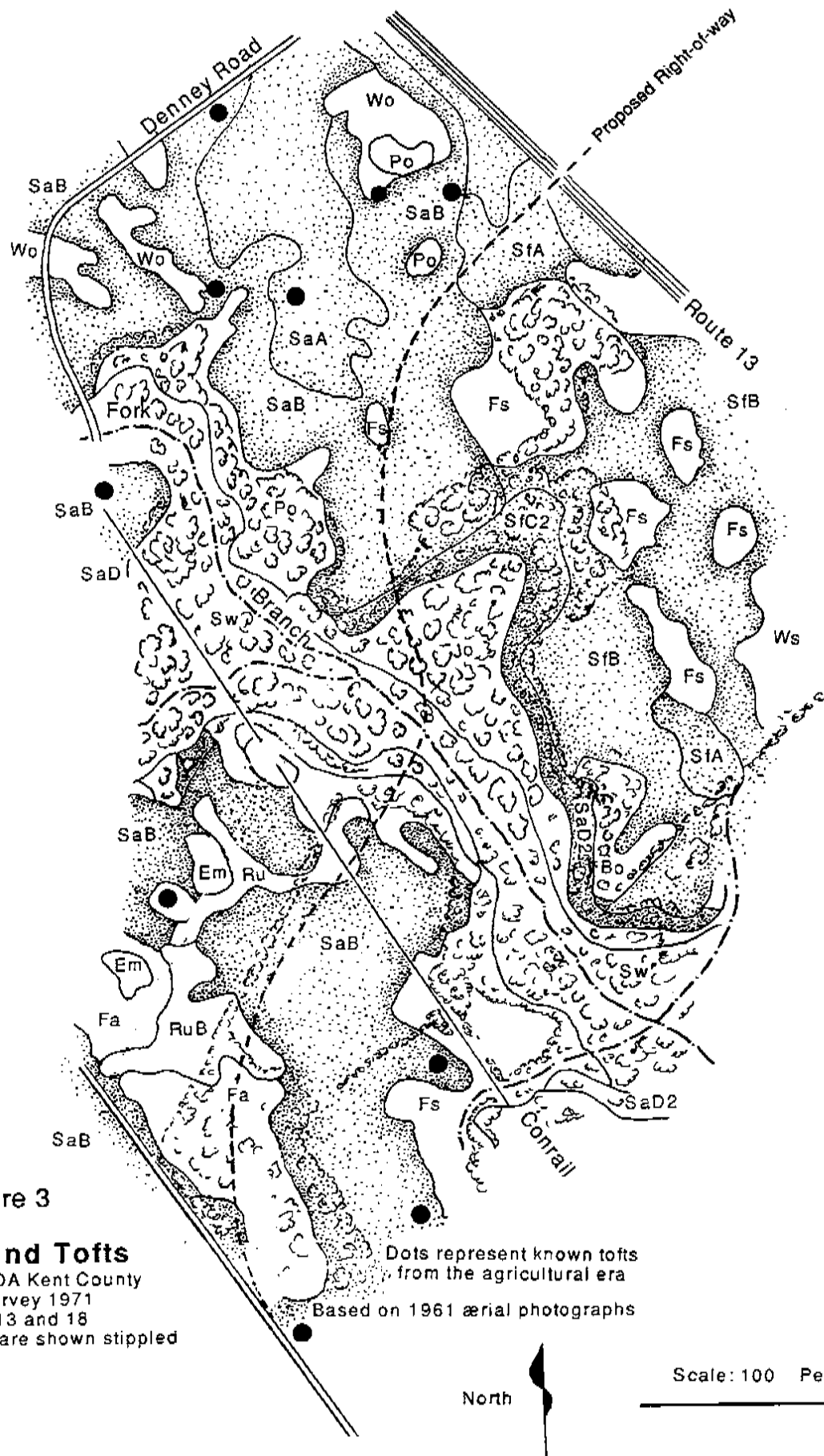


Figure 3

Soils and Tofts

Source: USDA Kent County

Soil Survey 1971

Maps 13 and 18

Sassafras soils are shown stippled

PREVIOUS INVESTIGATION IN THE VICINITY

Few prehistoric sites in the uppermost part of the St. Jones drainage have been excavated. Louise Heite found some scattered prehistoric remains at 7K-C-111, a short distance upstream on Maidstone Branch, including some pottery indicating woodland-period occupation (Heite 1984). At 7K-C-113, she excavated a ridge along the edge of a swamp on Fork Branch a short distance upstream, where points, chips, and flakes were found (Heite and Heite 1985).

On the present site of the Kent Vocational-Technical School, the former Delaware Section of Archaeology found a site, 7K-C-81, identified as a probable procurement site. This site has been destroyed by construction of the school.

Site 7K-C-107, Blueberry Hill, was identified during a stratified sampling survey conducted by the University of Delaware Center for Archaeological Research (Custer and Galasso 1983). No diagnostic artifacts were recovered during that survey, and the site was classified as a possible procurement site. This site has been damaged by dirt bikes and sand removal, but a small portion of the critical riverfront terrace survived more or less intact. This remnant has since been fully excavated by these authors, and a report is in preparation.

Historic-period house sites, both mansion houses and tenant houses, in the project area have been continuously documented since the eighteenth century. Known tofts are shown on the soil map (FIGURE 3). Previous investigations in the area demonstrated a relationship between toft locations and soil types, which are further explored in this report.

PREHISTORIC ENVIRONMENTS

People arrived in the Delaware Valley near the end of the last (Wisconsin) glaciation (Kraft 1986:31). Glaciers entrapped so much water that the ocean lay fifty miles east of the present Sandy Hook, New Jersey. As the glaciers retreated and the ocean advanced, the project area's ecology changed.

During the ten millenia before European settlement, Delaware's climate evolved from glacial tundra to temperate hardwood forest.

These changes in climate have influenced changes in man's subsistence strategies, family structure, and social organization through time.

Man's adaptation to the changing climate was marked by gradual cultural evolution. Custer and DeSantis (1986) have provided a useful table that correlates cultural and climatic change:

<i>Dates</i>	<i>Environmental Episode</i>	<i>Cultural Period</i>
8080 BC	Late Glacial	Paleo-Indian
6540 BC	Pre-Boreal/Boreal	Archaic
	Atlantic	
3110 BC	Sub-Boreal	Woodland I
810 BC	Sub-Atlantic	
AD 1000		Woodland II
AD 1600		

PREHISTORIC BACKGROUND

At the beginning of human occupation on Delmarva, mammoths, musk ox, horses, caribou, and walrus provided food for dire wolf, short-faced bear, and other predators. Man was among the smaller competitors in the tundra food chain, but his skills compensated for his physical shortcomings. Nomadic people of this Paleo-Indian period were among the most skilled makers of stone tools in the world. They would travel great distances to quarry the best flinty cobbles from which they made exquisite spearpoints, knives, and small tools.

Within the Denney's Road project area, there is limited potential for sites occupied during the Paleo-Indian Period, according to accepted models.

There is potential for outlying hunting sites southeast of the project area, where the floodplain of Fork Branch widens into a swamp, and to the west at the confluence of Fork Branch and a tributary. Based on existing information, one can expect sites

from the Paleo-Indian period will most likely occur west of the project area nearer the peninsular drainage divide.

The Paleo-Indian hunting - gathering society lasted in the coastal plain until about 6,500 BC, when the Atlantic climate episode and the Archaic period of prehistory began (Custer 1984:31). Northern hardwood forests had replaced the tundra, the ocean was rising as the glaciers receded, and the climate was warmer. Pleistocene megafauna were replaced by smaller game, which required different hunting techniques and tools.

Archaic people fashioned tools of a variety of lithic materials, including quartz, a material that is less tractable than the flinty cryptocrystalline silicate materials that Paleo-Indian people had favored. Ground stone axes and other heavy tools appear during this period. Many of these tools suggest a greater reliance on nuts, seeds, and other plant foods than indicated by Paleo-Indian tool assemblages.

Comparatively little is known about Archaic settlements. Archaeologists suspect that larger settlements may have been located along the ancestral Delaware River. These sites were later inundated as sea level rose and the river valley was invaded by the Delaware Bay estuary. Within the project area, micro-band base camps can be expected in sheltered locations along Fork Branch, while procurement sites are likely to be found in association with bay/basin features like Simon's Savannah.

By 3,000 BC, prehistoric society was decidedly different. Because people had stopped moving around so much, regional cultural differences began to appear in the artifact assemblages. Sedentary lifestyles ultimately led to horticulture, complex religious practices, and the accumulation of more, less portable, material goods. The last prehistoric period, the Woodland, is characterized by larger groups of people living together in villages, using pottery and other heavy or fragile goods that would have been difficult to move frequently from place to place. Woodland people tended to concentrate in more or less permanent settlements at places with abundant multiple

resources, such as sites adjacent to shellfish beds on the edges of salt marshes. They sent out hunting parties, but they seldom dispersed whole populations to live off the land in the manner of their hunter-gatherer ancestors.

COLONIAL BACKGROUND

Kent County was first settled by Europeans during the last third of the seventeenth century, long after the adjoining baliwicks of Lewes and New Castle. The earliest grants to settlers between Duck Creek and Mispillion Creek were made in 1671, seven years after the English took possession of the Delaware Valley (Jackson 1983).

Kent County therefore lacks the Dutch and Swedish components that characterize New Castle and Sussex. In particular, Kent County does not have "long-lot" settlements that distinguish Dutch, Swedish and early English colonization tracts elsewhere in Delaware (Heite 1973:5,4).

A sizable number of the earliest settlers were from Virginia and the West Indies; some historians have theorized that they settled in Kent County in order to establish wheat farms to feed workers on the sugar plantations of the Caribbean.

Lower Delaware developed as an agricultural area, with a sizable African-American slave population. Remnant Native American groups remained in the community, but their identity was submerged for two centuries.

COMMERCIAL BACKGROUND

From the establishment of Philadelphia in 1682, central Kent County and most of downstate Delaware was part of the Philadelphia commercial sphere. The only convenient way for a Delawarean to reach a market was by water to the metropolis.

Even after Delaware broke away from Pennsylvania politically in 1776, the Bay's local commerce flowed into the Pennsylvania economy. Western Kent County and western Sussex were part of the Baltimore trade region for many of the same reasons. This dependence upon the shallow trade to Philadelphia focussed Kent County's

development at landings, where the high ground came down to the tidal rivers. Such places included Leipsic [Fast Landing] on Little Duck Creek [Leipsic River], Little Creek Landing on Little Creek, and Forest Landing at the head of navigation on St. Jones near the present village of Lebanon.

Inland from the landings, farmers depended upon roads that ran along the spines of the necks between the rivers. These roads often served also as portages across to the Chesapeake drainage, and as arteries for local traffic within each community.

Where the east-west landing roads met the north-south King's road to Philadelphia, towns would eventually be established.

When steam navigation and railroads were introduced during the nineteenth century, Delaware's farmers were afforded better access to Philadelphia and the markets beyond. As the Pennsylvania Railroad opened Chicago and the West, Delaware farmers enjoyed prosperity they had never known before.

During the twentieth century, automobiles, trucks, and paved highways changed the commercial patterns in Delaware. With the building of Route 13, which passes the site, Wilmington began to loosen Philadelphia's grip on the business life of lower Delaware.

Wilmington's dominance may prove to have been fleeting, as Dover has come into its own as Delaware's second city and as a commercial center in its own right, which in turn generated the traffic that led to the project that prompted the present study.

RURAL INDUSTRIAL BACKGROUND

Timber has been important in the area since Colonial times. One of the first resident landowners of the project area powered his sawmill by damming the main branch of the river downstream from the project area. Just

above the project area, Maidstone Branch powered a sawmill during the nineteenth century. Remains of a motor-driven sawmill still stand in the project area.

Since the project area is dotted with patches of agriculturally unattractive boggy ground, much of it has remained in timber until the current generation, when developers have begun building with little regard for the pre-existing environment.

Environmental insensitivity is a new phenomenon in the local land-use picture. Until the project area began to urbanize, most human activities could be predicted by reference to environmental factors, such as natural drainage, soil suitability, and water.

The drift away from environmental responsiveness in land use began during the nineteenth century, when new machines allowed the farmer to locate his house without regard for certain natural features, and to cultivate larger fields with less human effort. Today's inhabitants, thanks to technological advances, appear to be almost independent of the natural environments that shaped every decision of their predecessors.

Only hunters, of all modern land users, continue the ten-thousand-year tradition of conforming to nature. In and around the project area, modern deer hunters' treetop perches can be seen adjacent to some of the most productive prehistoric sites, where ancient hunters waited in the same fashion by the deer trails and sharpened their weapons, leaving little piles of retouching flakes for the archaeologist to find.

These same sites, on bluffs beyond the edges of the fields, have been favored in recent years for another kind of human activity: dumping. Every sort of modern trash can be found in woods along the perimeters of the high ground, and some of it is old enough (greater than 50 years) to qualify for consideration in cultural resource surveys.

2. RESEARCH ORIENTATION AND THE STATE PLAN

PREVIOUS ARCHÆOLOGICAL RESEARCH in the region has provided valuable insights into the locations of human activities through time. In some cases, as in the project area, settlement models are so well developed that sites can be predicted with uncanny accuracy, but there is yet much to be learned about human utilization of this part of Kent County.

THEORETICAL ORIENTATION

The research for this project reflects a cultural materialist theoretical orientation. Cultural materialism refers to the study of the effects of technology and environment on human behavior. Culture is viewed as a form of adaptation to both the natural environment and the social environment that results from the interaction of human individuals and groups (Custer 1986:2; cf. Harris 1968:240-41; Harris 1979).

This theoretical approach is explicitly incorporated into the Delaware management plan for prehistoric archæological resources (Custer 1986:2). A complementary management plan, which deals with historic archæological resources, follows similar lines (DeCunzo and Catts 1990). The cultural materialist approach is implicit in the development of models which use features of the natural environment (such as soil types or topography) or elements of the cultural environment (such as roads, landings, or farmsteads) to predict the locations of a variety of property types, including prehistoric settlements, cemeteries, and industrial sites.

Using this theoretical position, we developed a research strategy which is designed for the efficient identification of both prehistoric and historic sites. The research strategy consists of the identification and application of models that predict the locations of the major historic property types which can be expected within the project area. These property types include both prehistoric settlements and historic tofts and are of particular concern because they can provide information on a wider range of

research questions than other properties considered in this study. Such an approach can be considered an empirical test of the positive statements of the models. It should be kept in mind, however, that the present exercise does not constitute a formal test of any model.

The dominant property type in the project area is the agricultural field, or *croft*. Because the extent of arable land has not changed, predictive models are not required to identify present or former agricultural fields. However, explicit statements about the relationship between agricultural practices and soil characteristics will be developed. Field observations will be used to determine whether these relationships are visible in the archæological record. This information can then be used in future studies to develop models which relate the use of particular agricultural practices to other social and environmental factors.

Drainage ditches in the project area are a well-documented property type. For the most part, their remains, consisting of both the ditch itself and the associated spoil pile, remain highly visible elements of the landscape. Furthermore, the purpose of these features is quite clear. They were created to drain wet areas so that they could be cultivated. We have, therefore, not attempted to define a model for ditch location. The research presented here, should, however, provide background information which can be used to develop models which relate the presence of ditches to other cultural phenomena.

The social impact of ditching, and its role in upward mobility of marginal farmers, is evident at two different locations, on opposite ends of the project area.

In historical archaeology, cultural materialism is also applied to the study of social and economic differences. Much of the historical archæological research of the last two decades has been directed toward identifying the material parameters of social, economic, and ethnic groups. Although this

economic, and ethnic groups. Although this is not the primary focus of the study presented here, both toft location and agricultural practices are influenced by the social and economic status of the farmer, and will be considered in a separate discussion.

PLANNING CONSIDERATIONS

The Delaware prehistoric cultural resources management plan identifies the Dover area as a region with "high/medium significant site potential with development pressure" that deserves special attention (Custer 1986:206). The project area itself is located along the eastern edge of the Mid-Peninsular Drainage Divide Management Unit (Custer 1986:178).

The study of sites in this zone which are likely to have been occupied during the Archaic Period has been identified as a priority research topic (Custer 1986:174). The study of Woodland I and Woodland II procurement and micro-band base camp sites is also important (Custer 1986:174-6).

The Delaware Comprehensive Historic Preservation Plan (Ames et al. 1989:33) places the project area in the Upper Peninsula geographic zone. European settlement had taken place within the project area by the middle of the 18th century, so that all but the earliest of the time periods established by the comprehensive plan are likely to be represented (Ames et al. 1989:37).

Two historic themes defined by this study, Agriculture and Settlement Patterns and Demographic Change, are represented by historic properties within the project area. Agriculture has been identified as the highest priority historic context for the Upper Peninsula zone for the periods 1770 to 1830 and 1830 to 1880 (Ames et al. 1989:83-4).

Settlement Patterns and Demographic Change are defined as the second highest priority historic context for this zone during the same periods of time. In view of the perceived importance of agriculture, the subject was afforded a separate discussion in the first report of this project (Heite and Blume 1992: 80-97).

EXPECTED PROPERTY TYPES

The number of property types which can be expected in the project area is quite limited. For the prehistoric period, procurement sites are the most likely property type in all time periods (Custer and Galasso 1983:10). These sites can be identified by their small size and the limited range of tool types. A limited number of micro-band base camps may also be found in the project vicinity. These sites are larger than procurement sites and a wider range of tool types is present.

For the historic period, three property types can be expected. The first of these is the toft, defined as "a homestead; the site of a house and its outbuildings" in the *Oxford English Dictionary*. In the catalogue of historic property types provided as Appendix C in the Delaware Comprehensive Historic Preservation Plan, the less precise term "plantation and rural farm sites" appears superficially to be roughly equivalent to the toft. However, most archaeologically-oriented researchers prefer the term "toft" because it commonly is construed to refer to all the land, buildings and artifacts related to the homestead, not merely to the random collection of buildings that might happen to survive above ground at the time of a cultural resource survey (Ames et al. 1989:146).

In an agricultural holding, the toft is distinguished from the croft, a term which refers to the fields, meadows, woodlots, and other parts of the holding not in immediate use by the homestead. Kenneth Lewis, who used the toft as the sampling unit in his study of the frontier town of Camden, South Carolina, provides a detailed but concise discussion of the nature of both urban and rural tofts (1977:175):

The term *toft* is used here to refer to the immediate site of a dwelling or other principal structure and its outbuildings. It is both a spatial and functional unit in that it designates the area within which occur those activities that lie closest to and are most intimately concerned with the functions of the principal structure. As such, the toft is not confined to a specific size or form and may vary considerably according to the nature of the structure with which it is

associated. In an urban settlement a toft might comprise an entire holding; however, in a rural settlement where holdings would include agricultural fields, the toft includes only that part of the holding in which activities immediately associated with the household are carried out.

Within the project area, only rural residential tofts are likely to be encountered. Predictive models based on documentary research will be used to identify the number of tofts likely to be found within the project area as well as the likely locations of these tofts (see Heite 1985).

The second historic period property type is the agricultural field, one element of the croft and the locus of a particular variety of human activity. In the catalogue of property types for the Agriculture historic context (Ames et al. 1989:141), fields are seen as exemplifying the products of agriculture, specifically fruits and vegetables and textiles.

Such a definition ignores the field as a workplace, or as the product of a farmer's labor. The field, including its chemical content, plow scars, and borders, is a property type that can speak volumes about the people who have tilled it (Heite and Blume 1992:80-97). In this study, agricultural fields are seen as providing evidence of agricultural practices, particularly reclamation methods and the use of soil additives.

Because little has been written about the agricultural field as an historic property type, in this study, we will concentrate on identifying observable traces of agricultural practices that might be archaeologically interpreted by future investigators. These evidences include planting holes and plow scars, artifact distributions, chemical traces of fertilizers, and physical traces of soil improvers such as marl and calcined shell.

The third property type for historic agricultural period resources which is likely to be found in the project area is the ditch. Ditches have been used throughout the historic period to drain wet areas in order to make them arable. Tax ditch companies were particularly active during the period 1830 - 1880. Many ditches have been re-dug

periodically over the last 100 to 150 years, but others have not.

The only expected industrial property type in the project area is the country sawmill, commonly powered by a farm tractor. Such mills allowed farmers to market the timber that grew on their wetlands, and to provide lumber for their own purposes.

EVALUATION CRITERIA

It will be necessary to evaluate certain sites in terms of possible eligibility for listing on the National Register of Historic Places.

Evaluation of National Register eligibility involves three elements: integrity, extent or boundaries, and context, which for archaeological sites is normally expressed as criterion D: properties that have yielded, or may be expected to yield information. The amount of information needed for reaching these conclusions may vary with conditions.

In a group of planning documents for the Route 13 Relief Route corridor studies, Custer and his associates have developed a framework for evaluating both prehistoric and historic sites (Custer, Jehle, Klatka, and Eveleigh 1984:113-129; Custer and Bachman 1986:192-194; Custer, Bachman, and Grettler 1986:178-180). Prehistoric sites can be ranked as follows, in descending order of significance:

1. All unplowed sites, regardless of period of occupation or site type, are of high potential significance.

2. Late Paleo-Indian and Archaic sites which have been plowed, but which are otherwise undisturbed, are of high potential significance.

3. Plowed base camps of all time periods are considered potentially highly significant.

4. Plowed sites which are not procurement sites and are associated with bay/basin features are potentially of medium significance.

5. Plowed, disturbed, and eroded sites of all types are potentially of low significance.

6. Plowed procurement sites are also potentially of low significance.

See Figure 5, page 24, for this list in flowchart format and page 95 for interpretation.

After these planning studies were completed, additional testing within the Relief Route corridor (Custer and Watson 1987; Ward and Bachman 1987) indicated the presence of buried components in a large number of sites, particularly those which had never been plowed. Such sites are capable of providing significant information for the study of prehistory because of the temporal separation provided by site burial. Thus, in this study, both plowed and unplowed prehistoric sites which include buried components will be evaluated as highly significant. The flowchart in figure 5, page 24, illustrates these ranks in graphic form.

Criteria for evaluating historic period sites developed in previous planning studies apply primarily to toft sites. The characteristics of significant sites are summarized as follows (derived from Custer and Bachman 1986:194):

1. Sites containing well preserved remains are highly significant.
2. Sites which display a range of well-defined activity areas are highly significant.
3. Sites which contain dense deposits of cultural material are highly significant.
4. Sites in which temporally distinct occupation loci can be identified, either as part of a long term occupation of the site or as a single short term occupation, are highly significant.

Because these criteria were defined for application to toft sites, they are not readily applicable to other rural historic property types defined for the project area, such as fields and industrial sites. In view of these lacunæ in the state plan documents, chapter 3 of this report addresses the subject of evaluating industrial sites.

VALUE OF PREDICTIVE MODELS

Because they are imposed artificially by researchers, survey strategies, by definition, will skew results. Today's site surveyors attempt to minimize subjective errors by using predictive models, random samples, and fixed interval tests. None of these strategies, however, can conclusively

demonstrate the absence of sites; nor can they guarantee identification of all sites that exist in a given study area.

Short of 100% excavation, any strategy is nothing but an educated guess, tempered by statistics. However, experience over the past 20 years has shown that the use of an informed strategy is the most effective way to maximize site identification, that is to say, to identify the largest number of sites with the least amount of effort.

The oldest strategy is the predictive model, used intuitively for decades and most recently codified and quantified on the basis of non-exclusive random surveys. Predictive models attempt to identify and quantify factors that help determine site locations, based upon data derived from surveys.

Too often, however, underlying surveys have been either subjective or less than exhaustive, causing models to be skewed. A good predictive model, to be accepted as more or less reliable, must be based entirely upon data that was not generated in a subjective manner.

Such a model exists for the St. Jones drainage (Custer and Galasso 1983) and has been incorporated into the state management plan for prehistoric resources (Custer 1986).

At the same time, regional surveys in Kent and New Castle counties have made it possible to quantify some of the relationships between site location and ecological factors (Custer, Bachman, and Grettler 1986; Custer and Bachman 1986).

Since historically most major sites have been identified by means other than random or non-exclusive surveys, it is difficult to justify using models based upon the whole corpus of survey data in many localities. This difficulty should not exist in the study area.

Because much of the project area has been cultivated for two centuries, the historic survey was expected to produce rich results.

Predictive models (Custer and Galasso 1983; Custer and Eveleigh 1983; Custer, Bachman, and Grettler 1986; Custer and Bachman 1986; Gelburd 1988) were used to identify potential prehistoric site

locations. Similar models were used to identify possible sites for historic period cemeteries (Heite and Blume 1992:33-37). Documentary research provided evidence for predicting the locations of other historic period sites.

Instead of mechanically testing with small shovel or auger holes at many fixed intervals along the centerline, the authors chose to test at locations where historical research or settlement models predicted sites might be found.

This decision was based upon the extremely wide variety of environments within the project area, which included bay/basin features, known house sites, woodlots that have never been cultivated, two points of confluence of major and minor streams, bluffs, and knolls. With such a wealth of promising environments, it was virtually certain from the outset that sites existed; the problem was to locate them and determine their nature, which could better be done by sampling a larger area at each potential site location. The excavation register (abbreviated ER) includes both 3' by 3' test pits and areas where cultivated fields were walked, as well as some interval shovel test pits and mechanically stripped areas.

The DelTech campus included large areas of fallow fields, where weeds had supplanted cultivated ground. It was therefore necessary to rely more upon test digging in these areas.

INTERVAL TESTING AS A STRATEGY

Interval testing, favored by many, requires the archaeologist to exert massive effort in places where both models and intuition indicate that sites are unlikely to exist.

Moreover, rigid interval testing changes radically the definition of a "site" for management purposes. Traditionally, a site has been defined as a place where artifacts are found and its limits are defined by identifying nearby places where artifacts are not found in tests sunk at fixed intervals.

Interval testing methods define a site as a place where artifacts are found in density sufficient to appear in mechanically-prescribed samples.

Interval or grid testing is a valid and useful method for defining limits of known sites, or mapping activity areas within sites, but the authors concluded that it should not be used to find sites, without serious consideration of other approaches.

WHAT IS A SITE?

Identification of sites with artifacts, or with certain numbers of artifacts in a given test sample size, forces elimination from consideration of the sites where artifacts are not found, or sites where the setting is itself the artifact, or sites where artifacts may be sparse or intangible.

It is more correct to define a site as a place containing evidence of human activity (Deetz 1967: 11). The subject of the archaeologist's attention can therefore be identified as the study of human effect on his environment, or the environment's effect on humanity. Any evidence of human agency therefore becomes an artifact within a site, which is more properly defined as any place where people left evidence from which we can draw conclusions.

For purposes of the present study, this shift in definition becomes useful, because some of the evidences of human agency are atmospheric, environmental, or even intangible. Soil chemistry, pollution, reflectivity of the ground surface, or the water table elevation, are all clearly artifact categories that cannot be recovered, boxed, and numbered with India ink. They are nonetheless artifacts in the sense that they are evidence resulting from human agency.

PREHISTORIC SETTLEMENT MODELS

Professional and avocational archaeologists in Delaware have long used an intuitive predictive model for prehistoric site location. This rather simplistic model stated that prehistoric sites were most likely to be found on high, well-drained areas near fresh water with readily available sources of food (Lewis 1970:2). With the advent of more

sophisticated technologies, such as LANDSAT imagery and computer aided statistical analysis, it has been possible to refine and quantify this model. The St. Jones watershed has been particularly well-studied.

A series of studies in the St. Jones and Murderkill drainages resulted in the identification of a set of probability zones that indicated whether a given area was highly likely or moderately likely to have been occupied during prehistoric times (Custer and Galasso 1983; Eveleigh, Custer, and Klemas 1983). These probability zones were derived from a logistical regression analysis of LANDSAT data.

Similar methods were applied to the 40 mile long, 7 mile wide Rt. 13 Relief Route corridor study (Custer, Jehle, Klatka, and Eveleigh 1984). For areas of the corridor immediately adjacent to our project area, high probability zones were found along the major tributaries of the St. Jones, such as Fork Branch and in association with bay/basin features (Custer, Jehle, Klatka, and Eveleigh 1984: Attachment V). Field tests of the probability zones developed for the corridor study indicated an extraordinarily high degree of accuracy.

Custer, Bachman, and Grettler (1986:172-8) then examined the frequency of site occurrence with respect to specific environmental variables. The results of this analysis can be summarized as follows:

1. The number of sites found in a given probability zone closely corresponded with the expected number of sites.
2. Seventy-five percent of the sites were found within 100 meters of water.
3. Thirty-eight percent of the sites were associated with stream confluences.
4. Stream terrace settings were favored as site locations over other geomorphological settings.
5. Well-drained soils, particularly Sassafras soils, were overwhelmingly favored over less well-drained soil types.
6. The aspect of a landform is of little significance.

These summary statements were developed for the Low Coastal Plain physiographic province and can be applied directly to the project area to identify probable site locations.

Information from the High Coastal Plain portion of the Rt. 13 Relief Corridor study can also be used, with some caution, to identify other possible site locations (Custer and Bachman 1986). In particular, this study identifies headlands and bay/basin features as the most frequent geomorphological settings for sites.

Using these statements about site location, we can identify specific areas of the project area which are most likely to have been settled during prehistoric times. These are the areas which were singled out for testing. They are identified by stippling on the sketch map, figure 2, on page 4.

The project crosses St. Jones River just below the confluence of its major tributaries, Fork Branch and Maidstone Branch. Such confluences are considered to possess a high likelihood of containing archaeological sites. One previously identified site, 7K-C-107, Blueberry Hill, is located on a headland overlooking the confluence of Fork Branch with Maidstone Branch.

Bay/basin features, the landlocked watery depressions that dot central Kent County, were heavily utilized during prehistory. As many as 90% of such features have associated archaeological remains, mostly from the Woodland I period, but including every period except the Paleo-Indian (Custer and Cunningham 1986:18; Custer, Bachman, and Grettler 1987:33). Testing of one such feature in New Castle County indicated that the archaeological material was concentrated on a sandy knoll in the center of a cluster of bay/basins. Such locations exist west of Fork Branch.

In the southern New Castle County part of the Route 13 corridor, nearly all the Woodland II sites were found in the fringe of forest land around the edges of plowed fields along bluffs adjacent to major drainages. Sites of this period were found to be small and tightly organized against the edge of the

bluff, which may explain why they were consistently missed during surface surveys of the adjacent agricultural fields (Custer and Cunningham 1986:25). Such locations exist in the project area on the both banks of Fork Branch.

At the nearby Mudstone Branch site, Louise Heite (1984) discovered a small, isolated, Woodland deposit on a knoll near a swamp along the creek, where the model predicted a seasonal procurement site could be expected.

Elevation was evidently a serious concern among prehistoric people when they were choosing sites. Even the very slightest existing difference in elevation can have a dramatic effect on the artifact content of the ground, as was demonstrated nearby in a 1985 project (Heite and Heite 1985). Similar vertical changes in artifact content were to be noted at Simon's Savannah (Heite and Blume 1992:42).

Micro-topography, recording contour intervals in the range of 10 centimeters or one inch, might profitably be employed to interpret such sites.

HISTORIC SETTLEMENT MODELS

Environmental factors and transportation considerations have been paramount influences on the location of historic-period toft sites in rural Delaware. Assuming that a settler had a choice of building at any place on his land, he followed certain rules of preference, some of which have been inferred archaeologically (Custer and Bachman 1986).

The earliest settlers chose water-oriented sites, within a convenient distance from navigable waterways (Smolek, Pogue and Clark 1984) at low elevations. Although water transportation was a significant component of the tidewater culture, it was never a major consideration for the inland settlers along freshwater streams.

Settlers who opened the back country, beyond tidewater, depended upon road transportation for local travel. As more inland settlers came to depend exclusively upon roads, emphasis shifted to inland routes

for circulation of goods, information, and services.

Road-oriented towns developed during the eighteenth century at places convenient to both landings and roads. Commerce moved inland from the old landings to new sites on the ridges, where roads to the interior crossed the King's road from Philadelphia to Lewes.

By the middle of the eighteenth century, new house sites were not oriented toward river transportation. Houses built after this time generally face roads, even though the farm might also have access to a landing.

This shift did not herald the end of waterborne commerce, however. Waterborne transport continued to link the Delaware hinterland with Philadelphia, but the internal distribution system within each locality was land-based, dependent upon feeder roads running generally east and west along the ridges between streams. Denney's Road was such an artery. In fact, it can be shown that the heyday of steamboat transportation in Delaware occurred after the railroads arrived. Only the relatively recent advent of hard-surface north-south highways finally extinguished river commerce in much of lower Delaware.

A general movement from water orientation to road orientation of farm tofts may be observed to take place gradually during two centuries. Beginning in the eighteenth century, new and stylish houses for property owners were built to face the roads, while older water-oriented properties eventually fell to disuse. A convenient site, near the middle of the holding, close to a source of potable water, continued to be the main criterion for toft placement. Later, when the railroads came, there was a short period when farmers built their houses to face the new transportation system.

SOILS AND TOFT SITING

Recent work in Virginia (Lukezik 1990) demonstrates that soil types were the principal factor in Colonial toft siting. Because farming success depends on soil characteristics, the plan of the farm may be

expected to reflect the farmer's perception of his soils.

One rule of toft placement was an unspoken prohibition against building in the middle of a good field, which was observed in the project area until the middle of the nineteenth century (FIGURE 3, PAGE 8).

This pattern was observed in the nearby Fork Branch area study, where houses were built on the edges of well-drained and fertile Sassafras soils (Heite and Heite 1985:25), but seldom, if ever, in the middle of a good agricultural field. Sassafras soil was too valuable to waste. Thrifty farmers built their houses on the edges of the best ground, which also frequently were the sites of natural springs for household water.

When mechanical pumps became available during the nineteenth century, toft siting was released from dependence upon naturally-occurring water sources. Strictures against building in the centers of well-drained fields began to relax. The movement of new toft sitings away from available surface water has been documented by Custer and Bachman (1986:168). This shift had occurred elsewhere before; during the eighteenth century, when the British upper classes were freed from dependence upon natural water sources, they began to build houses on more imposing sites, to which they could pump their water (Trevelyan 1942: 403).

While today's soil scientists grade soils in terms of suitability for cropland, woodland, and other uses, eighteenth-century settlers valued only the land that could be used for agriculture. Dutch settlers had placed a high value on meadowlands and drainable marshlands; the first English in Kent County were interested only in arable cropland, known today as Class I soils.

Some proprietary land warrants for inland tracts describe poorly-drained upland property as waste, suitable only for timber. Timber suitability, in the modern soil survey, is applied to land that colonists did not cultivate. Old surveys in the project area, which often show the cultivation patterns, indicate that only the well-drained and relatively level Sassafras soils were cultivated.

Sassafras soil also was attractive for town sites, because it is well-drained and occurs on ridges between drainages (Heite and Heite 1986). Virtually every eighteenth-century Kent County town was built on Sassafras soil. Builders and developers have extended this preference to modern suburban subdivision, which in Eastern Kent County is almost exactly congruent with the Sassafras soils.

During the nineteenth century, new farmsteads were most frequently established along roads, as fewer farmers depended primarily upon water transport.

IDEOLOGY AND TOFT SITING

Another reason for the shift to building houses in the centers of fields may have been ideological.

Nineteenth-century "mansion" houses — homes of landowners — tended to be built on physically imposing knolls or rises, looking down on the roads. New tenant tofts were established close to the roadways, frequently on soils that were not considered the best agricultural ground, but which today are considered suitable for woodlands. It is possible to interpret this class difference in site location as a symptom of romantic or neo-feudal concepts or of social stratification. It certainly can be shown that the popular literature of the middle nineteenth century is full of pictures and articles indicating that an exemplary farm is elegantly situated, with the owner's wealth displayed to the road for all to see.

An array of picturesque tenant houses along the road would not only provide housing for farm laborers, but would advertise the extent of the master's livery.

Locational factors relating to rural tofts have been explored in southern New Castle County by Custer and Bachman (1986:152-192) in a study that considered distance from resources, soil types, and water sources.

The Delaware Rail Road in 1856 brought significant changes in the landscape. Because the railroad followed a straight line dictated by larger engineering considerations,

railside development was dictated by factors other than soil types for the first time in history. Railside towns were built on poorly drained soils; properties were split by the right-of-way, and new industrial land uses were introduced.

The economic and political influence of the railroad was significant to Delaware history. Few institutions have wielded as much power as the railroad company, and few innovations have brought so much prosperity. The iron horse opened western Delaware farms to urban markets and generally stimulated the agriculture of its service area. Land values along the railroad increased, and it briefly became fashionable to build great houses facing the tracks.

LAND AND OTHER MEASURES OF WEALTH

Many of the original grantee families treated their extensive holdings as long-term investments, selling off pieces as the need arose, and swapping farms to create broad manorial holdings. Eighteenth-century Dover merchants, such as John Housman, Thomas Parke, and Nicholas Loockerman, became lords of vast acreages.

Much of the granted land would remain undeveloped or under-developed, sometimes for generations, because its function [in the eyes of its owners] was financial and not agricultural.

The merchant class converted land into ready money through a device called the "loan office," which held mortgages and issued commercial paper backed by the mortgages. Such land banking schemes, forerunners of the modern Fanny Mae instruments, were used in several colonies to overcome the lack of specie (hard money) as a circulating medium in an economy where most wealth was represented by land or by credit in distant European markets.

Merchants in London, Bristol, and other "home" cities were bankers to the American landowners and small merchants. They supplied European goods and sold American products on European markets. The Atlantic basin was a single market controlled by Dutch and English merchant houses, who decided what material goods

would reach America, at what price, and through which ports. Through this sophisticated network, Dutch and English traders would sell Icelandic woollens to Indians in America, and Delaware wheat to the Caribbean sugar planters, exchanging very little specie in the process.

Tracts in Kent County were heavily mortgaged during the third decade of the eighteenth century, when the Delaware loan office was most active. A London merchant held the mortgage on the present DelTech campus during the period when it was being used to back commercial paper, before it became the Stout family farm.

The alignment crosses land that was a tenant farm owned by absentee landlords for two centuries, until 1888 when the first resident owner bought it. Such widespread absentee ownership would have a depressing effect on Kent County during the early years of the twentieth century.

Tenancy can be expressed in the archaeological record several ways. The most obvious expression, which has been explored by several authors, is an examination of the tenant toft (Grettlar, Bachman, Custer and Jamison 1991). But the soil itself might reveal differences in status of the cultivator. While one might intuitively assume that an owner-farmer will treat his soil more carefully than a tenant, this assumption is not necessarily proven.

Soil improvement may, instead, be a measure of education and contact with the larger intellectual community, which can be lumped under the rubric of gentrification.

EVIDENCES OF GENTRIFICATION

Those colonial Americans who prospered were the ones most closely associated with the larger trading network. Prosperity, and enjoyment of the most stylish European goods, dropped markedly as one moved away from American points of contact with the European trading sphere. Rebecca Yamin (1989) has demonstrated that stylish European goods became progressively more scarce on store shelves with increased distance from port cities.

Differences in style and price of material culture items may therefore be interpreted as measures of cultural and economic distance from the points of trading contact with Europe. It was entirely possible for a person with roots on the frontier to be land-rich and even wealthy, but culturally cut off from the stylish mainstream culture in the larger Atlantic basin.

In Delaware, some eighteenth-century mercantile sites have been studied and analysed in terms of availability of goods. Others are currently being studied. Stores will be able to tell us what was available for sale locally to the everyday individuals, but are not a clear indicator of the material culture available to wealthier individuals who were connected to upper-class urban society and routinely bypassed the local merchant establishments.

Well-off and well-connected individuals should have been willing and able to buy high-style material culture artifacts, or to order them directly from Europe. Some Kent County families maintained close communication with centers of style. Among them were the Loockermans, the Ridgeleys, the Dickinsons, and the Chews, who sought marriage alliances in cities, sent their sons away for schooling, and participated in the larger high culture. Sons of these families almost always were described in legal documents as "merchant" or "gentlemen" as soon as they established households, regardless of their personal financial accomplishments.

Other families of considerable wealth were headed by people sometimes identified as "gentleman" in legal papers, but did not enjoy cultural intercourse with centers of high material and non-material culture. Heads of such families ordinarily began as "yeoman" farmers and became "gentleman" at a later age, after having attained relative wealth and leisure by their own exertions.

Archæology may be able to distinguish between the hereditary gentry of culture as opposed to the rising gentry defined only by wealth and acquired status, and may be able to define the passage of a

family from new wealth into hereditary gentility.

Tea ceremonialism, for example, leaves a distinct mark on the archæological record, and is often construed as a proxy measure for gentrification. There should be other indicators of this phenomenon that will be exemplified in the ground.

George Miller (1980) has attempted to assign an *economic* scale to preferences in ceramics during the nineteenth century, but non-economic social scales and tangible measures of gentility remain elusive.

In Mother England, the path to landed gentry status had led through mercantile towns, where ready money could be earned and converted into land, on which a new gentleman could establish himself and his posterity. In America, land was cheap, but ready money was dear; acquisition of great estates was not nearly as important or as difficult as was a connection to cultivated urban society. Status went hand-in-hand with access to the material and non-material culture and money economy of the towns.

Archæological markers for high cultural refinement, as distinguished from mere wealth and status, deserve consideration in a project area where several different social classes and modes of tenure are represented.

Stylish households probably will exhibit fast turnover of the best quality ceramics, always at or near the cutting edge of style. The earliest forms of each type will appear on stylish sites, but degenerate later forms should not be expected. On the other hand, people who depended upon the hinterlands trade network might be expected to use later, less refined versions of stylish ceramic wares, and to hold onto a style for much longer. Thus the term "Queensware" could remain in commerce a century after the original Queen's pattern was introduced and discarded by polite society.

During the last decade of the nineteenth century, Sears, Roebuck and Company recognized this division between city and country access to stylish goods, and became the world's largest retail organization by offering city goods to rural markets where

money was available, but stylish goods had never before penetrated.

Thus the true cultural impact of transport and communication improvements may be measured archaeologically through the stylishness of goods and the turnover rate of new fashions found in the countryside.

DECLINE IN STATUS AND UNDER CLASSES

The inverse of gentrification has been documented among landowners near the project area (Heite and Heite 1985). A yeoman family of substantial means and skills, but of mixed racial heritage, declined to poverty during three generations, with a change in race perception and concurrent decline in status.

It was not possible during the former project to archaeologically explore the changed status of these downwardly-mobile individuals, but the phenomenon was clearly identified in the documentary research as a subject for future investigation.

In the project area were some people identified as poor tenants or farm laborers during the early nineteenth century. One, identified before 1840 as a free Negro, had unrecorded but recognized tangible rights in part of the project area; the location of his house site is well documented.

ARCHAEOLOGY OF AGRICULTURE

When a farmer changes the soil, his fields become artifacts in the sense that they are evidence of the farmer's effect on his surroundings.

If the archaeologist finds a plough, it is readily identifiable as a tool of farming, from which evidences of farming practice, manufacturing techniques, and distribution networks are readily inferred.

By the same standards, a sample of soil can illuminate the farmer's craft in ways that are just as tangible and revealing as the iron tools that are so readily catalogued by traditional archaeological means. Soil contains chemicals, bits of limestone, shells, ashes, manure, compost, and of course, the occasional lost piece of equipment.

These bits, individually insignificant, constitute aggregate artifactual evidence not

readily addressed by traditional artifact cataloguing schemes. The total of introduced materials, together with the properties of the soil, such as tilth and drainage, combine to measure the farmer's success in creating the topsoil that in turn supported his crops.

Although agriculture receives a nod in the state plan for historic preservation, the technology of the farmer's craft has not been addressed by the plan as a context for attention in cultural resource management. At minimum, agricultural fields and other "vacant" or "open" spaces should be evaluated according to the criteria applied to other historical archaeological sites.

As these features are reported more fully, it may become possible to evaluate the significance of agricultural fields as a property type.

Since most cultural resource management projects involve agricultural ground, there is a perceived need and opportunity to create frameworks for studying man's effect on this important environment.

AGRICULTURAL CHANGE

Scientific agriculture, as it is practiced today, was unknown during the first years of settlement. Only after large areas had been rendered infertile did American farmers begin to address the problems of conservation and fertilization.

The first documentation for improvement of farming practices in the project area comes from an Orphans Court document dated 1796, in which the commissioners directed that the crops on Susannah Loockerman's land be rotated. Since the commissioners felt constrained to mention the subject, one may assume that the Loockerman tenants had not been rotating their crops. During the generations that followed, educated landowners conducted experiments and read the many agricultural treatises and journals that were published. Evidence for such practices, recovered archaeologically, may help define the educational level and ambition of the farmer, as well as the quality of his land tenure.

Scientific farmers introduced the concept of fertilization, which received a

boost in Delaware when a marl deposit was found during the digging of the C&D Canal. Manure, shell lime, and other products were added to the soil during the early years of the nineteenth century, and by the time of the Civil War, the peninsula was dotted with fertilizer companies. Sources of nitrogen, including guano, fish, dried blood and horseshoe crabs, were spread across the landscape in attempts to recover lost fertility.

Calcined oyster shells, bits of marl, and household artifacts contained in manure may be readily recovered and quantified even during Phase I surveys.

Brick flecks in the field could indicate that fireplace ashes were used, since unlined chimneys commonly spall from the inside, creating a durable component in the ash that was included in manure.

Delaware soil productivity reached a nadir in the 1830s, when it was estimated that Delaware's farmland was within five years of total abandonment. Instead of collapse, the region rebounded during the next few years,

thanks to aggressive young scientific farmers (Passmore 1978).

One tangible result of the scientific agriculture movement was Kent County's system of tax ditch companies, cooperative efforts to reduce groundwater levels and reclaim land. By 1976, there were 44 ditch companies operating in Kent County. The project area includes the mouth of White Marsh Ditch, a hand-dug ditch that apparently has not been improved during the twentieth century.

Early scientific farming practices can be seen in the soil in the form of ditches, drain tiles, calcined oyster shells, and tiny dispersed bits of brick and domestic debris that would have been included with manure.

The principal landowners in the project area, the DuHamel and Denney families were active in county and state agricultural societies during the middle years of the nineteenth century (Scharf 1888:437). Their land should be expected therefore to reflect some of the trends in scientific agriculture.

Figure 4
Sample of the Excavation Register
derived from the original survey data

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
56	Athletic Field K 6453 7K-C-388	Machine-cut east-west test trench across the athletic field north of the basketball courts, 155 feet from the beginning stake to the end at the zero point on ER 57. A paved walkway separates ER 56 from ER 57 SaA	No artifacts
63	Beiser Site 7K - C -391 K-6485	Level 1 (plowzone, 0 to 20 cm below surface) of unit located southeast of centerline stake #8 + 50, on east slope of ridge.	1 jasper flake, <2 cm 1 clear glass fragment
63a	Beiser Site 7K - C -391 K-6485	Level 2 (20 to 40 cm below surface) of unit located southeast of centerline stake #8 + 50, on east slope of ridge. Bottom of level corresponds to top of C horizon.	No artifacts

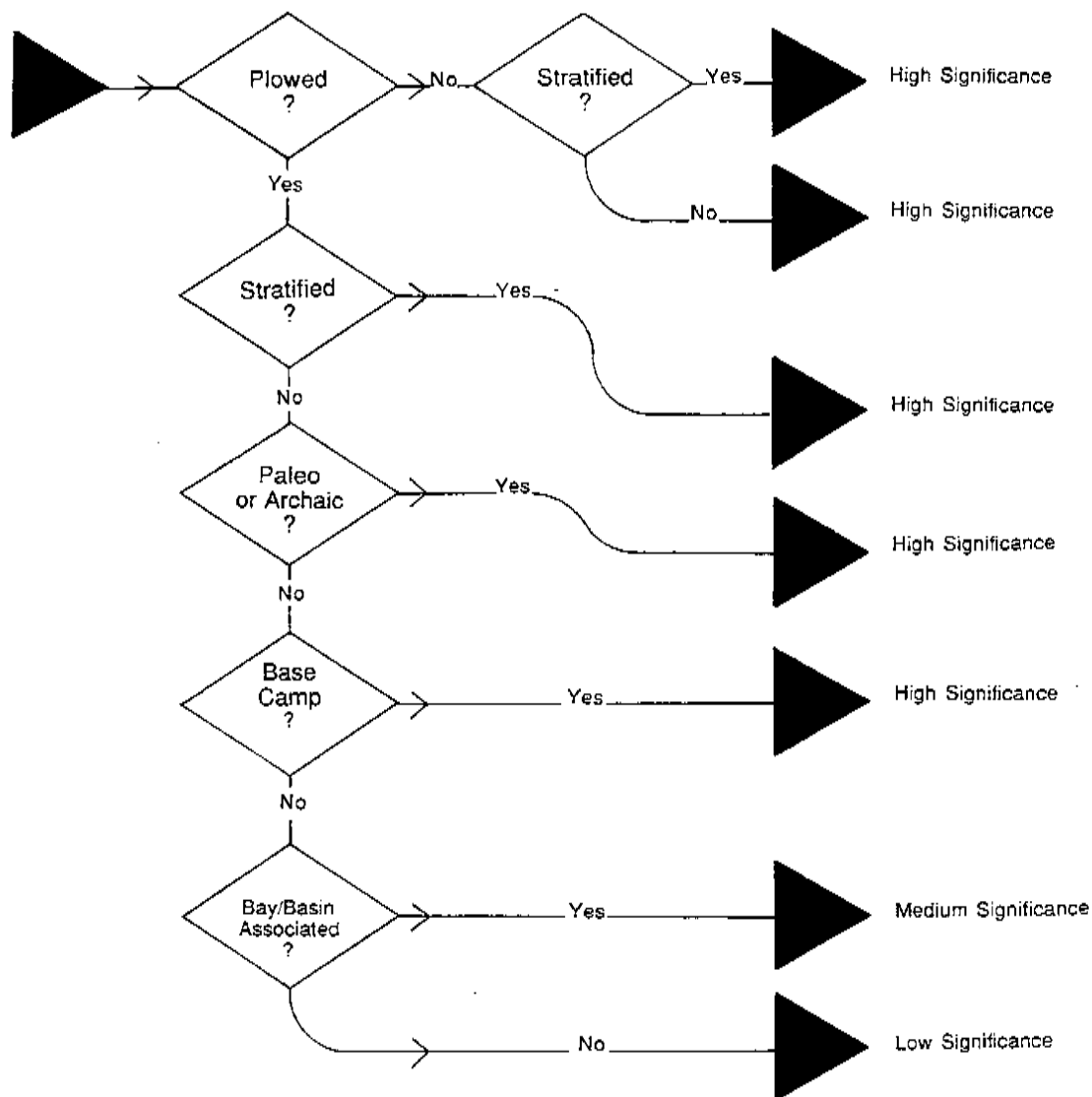


Figure 5
Flowchart Ranking Delaware Archaeological Priorities

This flowchart illustrates the ranking of archaeological significance of prehistoric sites, as evaluated in the state management plan, discussed on page 14
 Sources: Custer and Bachman 1986; Custer, Jehle, Klatka and Eveleigh 1984; Custer, Bachman, and Grettler 1986

APPROACH AND METHODS

Survey consisted of intensive primary documentary research followed by field reconnaissance, culminating in field testing. Primary documentary research begins with a detailed chain of title compiled from official

records. Other official records, including highway construction data, are consulted to determine what forces have shaped the local geography.

To these official records are added oral history interviews of local residents and research into secondary writings about the

local landowners. Map information for downstate rural sites is sketchy at best; the 1868 Beers *Atlas* stands almost alone among general sources, but there are many surveys on the public record to give locations of improvements.

Details of the methods employed for searching Delaware primary historical sources are explained in an article by one of the authors (Heite 1984).

Collections were catalogued according to the Excavation Register (ER) system, in which each unit bears a whole number and each layer is lettered (Noël Hume 1969:89). A "unit," for purposes of the excavation register, may be a square or a surface collection, or any other group of artifacts with a definable provenience. These excavation register numbers, with a prefix (90.23.) assigned by the Curator of Archaeology, become the Island Field

accession number, allowing direct reference to artifacts from the site without reference to any intermediate catalogue. Samples of register entries from the original survey are illustrated in Figure 4, page 23.

Laboratory treatment of artifacts was limited to cleaning and numbering, since there were no fragile, waterlogged, or otherwise special-care artifacts. Therefore, the services of a conservator were not anticipated. All artifacts were marked and bagged according to Delaware curatorial standards and turned over, with field records, to Island Field Museum.

Analytical procedures included examination of soil chemistry and soil profiles. Soil chemicals were used to interpret past agricultural activities as well as domestic activities. Soil profiles were interpreted in a prehistoric locus to reconstruct paleoenvironmental data.

3. ETHNICITY, INDUSTRY AND AGRICULTURE

THE FIRST REPORT of this project (Heite and Blume 1992) addresses most planning considerations that drove the current project. Closer examination of the sawmill site, and inclusion of the Mosley tract west of McKee road, added dimensions of industrial archaeology and ethnicity, neither of which had been addressed sufficiently by the earlier volume or by existing state preservation planning documents. During the review process, it became apparent that certain classes of cultural resource need to be further defined.

This discussion should not be necessary, but for artificial semantic and administrative partitions that have come to compartmentalize cultural resource activities. Resources are not well-served when particular disciplines are allowed to reserve certain site categories as their exclusive jurisdictions.

The preservation program divides all historic properties into categories of building, site, structure, object, or district. Over the years, these categories have been arbitrarily and sometimes illogically assigned to the exclusive supervision of certain disciplines, each with parochial interests and emphases.

ARCHAEOLOGY OF INDUSTRIAL PROCESS

Industrial archaeology, as distinct from the historical archaeology of industrial sites, is a discipline largely absent from Delaware cultural resource surveys and planning. The Delaware preservation program lags behind other industrial states in its attention to industrial archaeology.

Regional and state industrial archaeological surveys elsewhere have been much more comprehensive in scope and results. The National Park Service is committed to industrial archaeology, or "IA," as its practitioners often call it. In western Pennsylvania, the Service coordinated one of the largest regional industrial preservation studies to date, the nine-county "America's Industrial Heritage Project." Half the steering committee were self-identified industrial

archaeologists (National Park Service 1991).

Industrial archaeology is one of the last subdisciplines where amateurism is an essential component. An example of the amateur-professional synergy is a recent 296-page comprehensive survey of iron, charcoal, and lime industry sites published by the Vermont Archaeological Society in cooperation with the state preservation agency (Rolando 1992).

DEFINING RESEARCH QUESTIONS

By training and inclination, industrial archaeologists are likely to focus on a process and the relationship of physical and social environment to the accomplishment of the process. Thus an industrial archaeologist will define his subject in terms derived from verbs, such as bridge-building, gunpowder-making, canning, or sawing.

Traditionally-oriented archaeologists, on the other hand, are more likely to begin their inquiry by defining data in terms of nouns describing things, rather than by references to ongoing processes.

Industrial archaeology frequently obtains insights through analysis of standing industrial artifacts, settings, and even from industrial processes still being practiced. Some of the most useful industrial archaeology studies have resulted in films of the last practitioners of disappearing industrial processes (Vogel 1969:92). The worker's context in the workplace is documented eloquently in such documentary films as *Working Places* and *Pioneer Axe*. Industrial archaeologists emphasize changes in process, and the impact of those changes upon society, often beginning with workers.

Since technology has been a major instrument of social change during the past two centuries, an industrial archaeologist must divide his attention between technology and the human environment. On one hand, he needs the expertise of a historian or practitioner of technology, while depending upon his or her own anthropological training to provide cultural context. Because such

diverse expertise seldom resides in the same person, industrial archaeology seldom is a solo effort by a single discipline.

Theodore Z. Penn of Old Sturbridge Village defined the objectives of industrial archaeology in a 1978 essay, quoting Webster's dictionary as his authority:

"Archeology is defined as 'The scientific study of the material remains of past human life and human activities.' This definition establishes that artifacts are the primary source of archeological knowledge and it draws no arbitrary distinction between objects found above or beneath the ground. Industrial archeology, then, can be interpreted as the scientific study of the material remains of past human industrial life and activities, regardless of whether the physical materials are standing intact on their original site or lying buried in ruins. Thus, the primary concern of industrial archeology is with the material culture of industry in the past as a unique source of information about human behavior."

IA METHODS AND APPROACHES

Delawareans have been at the forefront of American industrial archaeology. The Hagley property near Wilmington was one of the first examples of a systematic industrial archaeological study (De Cunzio and Catts 1990: 91). Hagley's graduate program was, in the past, a major training ground for industrial archaeologists.

A paper by Robert Howard of the Hagley Museum, entitled "Black Powder Manufacture," appeared in the first issue of *IA*, the journal of the Society for Industrial Archaeology. The article was organized according to process stages and was illustrated with historic photographs of Hagley workers in action, ancient engravings, and museum models based upon archaeological findings (Howard 1975).

Differences in emphasis between the archaeological approaches are evident by comparing two recent studies. Canneries at Flemings Landing and Lebanon were investigated simultaneously in connection with bridge replacement projects by teams with different approaches, producing different results (Coleman, Hoseth, Custer, and Jagers 1988; Heite 1990a).

The Lebanon data recovery was a typical industrial archaeology project that concentrated on processes and the larger

context of change in the canning industry. Collaborators included a tinsmith, to interpret craft remains, and an amateur local historian of the canning industry, to provide a specialist view of local industrial history.

The report on Flemings Landing, which did not extend beyond Phase II, contained no mention of industrial processes and cited no sources on the history or technology of the canning industry. While both schools have their strengths, it is difficult to justify investigating an industrial site without reference to the technology being studied.

A model for coherent multifaceted industrial archaeology is the massive four-volume dissertation by Iain C. Walker (1977), which combined documentation, excavation, and observation of working pipe makers to produce a coherent technological and cultural chronicle of the pipe-making industry.

Walker, a British-trained historical archaeologist, compared the technical vocabularies of pipe makers in different countries to supplement artifact data that helped him trace the movement of manufacturing technology. He showed that the name for a tool travels with its use, and can be as important to archaeologists as the tool itself. His photographs and interviews of working pipe manufacturers helped to explain the pipes found in the ground and the excavated remains of pipe making sites.

INDUSTRIAL ARCHAEOLOGY IN AMERICA

Formal study of industrial archaeology in America traces its separate origins to a meeting in 1967 at the Smithsonian Institution, attended by about 30 historic-preservation and museum professionals as well as a few "dirt" archaeologists. Guest of honor was Kenneth Hudson, whose handbook on the subject recently had been published by the Council for British Archaeology.

At that meeting, Hudson introduced the idea of above-ground archaeology as a recording technique. While it was then a novel idea to Americans, the archaeology of above-grade artifacts has a long and respectable history in British archaeology. To an industrial archaeologist, sites need not be buried, or even inactive, to be proper subjects

for study. Industrial archaeologists apply archaeological documentation methods more frequently to above-ground features than to buried ones.

The British term, "*Industrial Archaeology*," brought immediate negative reaction from a few traditional archaeologists working on American industrial sites, who rejected an archaeological subdiscipline that included the participation of technological historians (Foley 1968), in positions where they might color archaeological interpretation (Foley 1969).

The interdisciplinary nature of industrial archaeology clearly has been distasteful to some American archaeological purists, then and now. Industrial archaeology relies heavily upon amateur (or at least non-archaeological professional) participation. To the industrial archaeologist, enthusiasts and craft practitioners are valuable collaborators, since they frequently possess detailed subject-matter knowledge or skills essential to understanding the evidence.

The opposition even went so far as to assert that archaeological data can be valid only if it has been "exhumed" (Foley 1968). In response, an industrial archaeologist pointed out that it is more efficient to record a building while it is still standing, or a declining industry while it is still practiced, than to wait until the human and material evidence had been buried (Vogel 1969). Some traditional archaeologists, even if they are sympathetic to the IA point of view, are wont to point out that the subdiscipline sometimes fails (or declines) to reach theoretical heights achieved by other subdisciplines (Schuyler 1975). Some in the field are working to formalize its diffuse academic roots. A graduate industrial archaeology program at Michigan Tech "emphasizes a truly interdisciplinary approach and fuses the individual perspectives of archaeology, history of technology and anthropology" (Lankton 1992).

INDUSTRIAL ARCHAEOLOGY IN DELAWARE

When the Society for Industrial Archaeology formed in 1971, Delaware's Hagley Museum was prominent among the institutions represented, together with the National Trust, the Smithsonian Institution, and the Historic American Engineering

Record (Hyde 1991). Delaware's early national prominence has not been reflected in the subsequent state preservation program

In spite of Delaware's primacy in the field, the state's preservation plans ignore the peculiar nature of industrial archaeology as a definable subdiscipline closely related to, but not necessarily always a part of, historical archaeology. The state management plan for historical archaeological sites addresses industrial and engineering sites under the domain of "manufacturing and trade," a catch-all that also includes some aspects of agriculture, home production and consumer behavior. Themes in this domain cover virtually every remunerative pursuit except education and religion. (De Cunzo and Catts 1990:121).

The plan, like the entire federal program, arbitrarily cuts off the temporal span of archaeological interest at the "early twentieth century" (De Cunzo and Catts 1990:21). This arbitrary cut-off does not coincide with the theoretical orientation of the typical industrial archaeologist.

A recent or contemporary site that embodies very old craft processes may provide significant data relative to a much earlier time. The date of the physical evidence may therefore be less important for their purposes than the age of the knowledge that went into its creation.

A valuable industrial archaeology resource, for example, was a shop operated until a few years ago by a Dover letterpress printer. It was built in 1960, to house a business that had been established a century earlier. The proprietor, Lena Simmons, had worked with the same type and equipment for 75 years by the time she retired at 95.

While the tools and type were useful nineteenth-century artifacts or valuable antiques, the site *as a whole* possessed industrial archaeological value primarily because the owner was able to recount folkloric details of how the equipment had been used, and the circumstances surrounding acquisition of particular items. Relative locations of shop equipment was particularly important to the final record. The resulting yet-unpublished study is decidedly archaeological, and already has been used to interpret shop sites that were conventionally "exhumed" (Heite 1990b).

DELAWARE'S CRITERIA FOR EVALUATION

In order for an industrial site, or any other site, to be eligible for the National Register, it must possess significance and integrity. The plan (De Cunzo and Catts 1990: 195-196) identifies five criteria for evaluating the significance of historical archaeological sites:

1. Documentation
2. Archaeological Integrity
3. Representativeness
4. Research questions and needs
5. Association with a person

Documentation may not be as simple as first appearances would indicate. Industrial sites are well documented. Business records are, after all, voluminous wherever they are kept. However, most business records are transactional. Plans of machinery, correspondence about innovations, and other operational evidence, seldom survive. When it comes to workplace environment and the lives of employees, even the best business records are inadequate. Archaeology can expand on the written database in the areas of technological innovation, labor conditions, and worker attitudes.

Integrity, a prime consideration in any determination of eligibility, is a sliding scale of relative values. A fully intact factory, from which waste materials have not been removed, would be the pinnacle of integrity. A few such survivals have been recorded, in technological backwaters where ancient workers continue to work at equally ancient machinery, carrying out obsolete processes.

Below that level, integrity must be evaluated quantitatively against a site's ability to provide information. Intact machinery, or evidence of machinery locations; dispositions of waste; and evidence of larger site layout, are all elements that must be evaluated in order to determine relative integrity.

Delaware's historical archaeology management plan contains standards for archaeological evaluation (De Cunzo and Catts 1990:194-197). According to these standards, archaeological integrity is evaluated under two criteria: temporal and physical, echoing the classic three literary unities of time, place, and action.

In the fast-paced world of industrial innovation, age is relative. Innovation can

render very new installations obsolete in far less than the fifty-year traditional span espoused by the National Register. By the time some technologies are fifty years old, there are no examples left to evaluate.

Computers and typesetting machines twenty years old are museum pieces. Whole industries have been created and disappeared in much less than a half-century. Clearly, temporal parameters must be adjusted in such cases, as a matter of course, during the planning process.

Physical integrity, in the historical archaeological sense, includes below-ground and above-ground architectural remains and land use. In the words of the plan, "The cultural landscape is to be seen as one other resource type, supplementing the documents, archaeological remains, and surviving architecture."

Representativeness is an attribute that must be sharply defined. Is the site representative of the common run of such sites? Or does it represent the cutting edge of a technology? This concept is best expressed statistically.

Research needs must be considered from several points of view. Each industry, as well as each region, has its research concerns. On the Pacific coast of Canada, salmon canneries are as important as tomato canneries in Delaware (Newell 1987). A student of the canning industry in general will be interested in both, but a student whose perspective is Delaware history will not necessarily be interested in salmon canneries. Industrial archaeology, by its nature, speaks to diverse research agendas. It is the responsibility of any on-site researcher to understand and serve the needs of distant users in disciplines other than his own.

Failed innovations are particularly interesting to historians of technology because they represent directions not taken by industry. Sites of fruitless experiments, while not representative, may hold considerable research value, since they might help explain why certain changes did not occur.

No survey with an industrial component is responsive to the data resource until it has been linked to the research needs of those studying similar sites worldwide, regardless of their academic orientation.

Association with a person, from the perspective of the National Register program, has been held to mean famous leaders, or otherwise exceptional individuals.

Unfortunately for the historical record, industrial historians and industrial museums have traditionally slanted their messages to reflect the accomplishments of rich white male industrialists who are their principal source of funding. Traditional industrial interpretation therefore tends to emphasize associations with "famous" people who headed companies or unions. Indeed, the academic study of "labor history" is more often the study of labor leadership rather than laboring people.

Industrial and labor historians were among the last to embrace the more egalitarian principles of the New Social History movement or the eclecticism espoused by Braudel and the *Annales* historians. As a result of this retarded evolution, the literature of industry and labor remains heavily larded with "great men" histories.

Recent researchers on industrial sites have sought to study the ordinary industrial operative, whose daily grind was largely ignored by traditional histories (Lowe 1982). Archaeological investigations of rooming houses at Lowell, or steel mills at Birmingham, have raised new questions about workers as individuals, rather than as a collective element in abstract economic equations.

INDUSTRIAL CONTEXT RESEARCH NEEDS

Because Delaware's preservation plans fail to address the distinct subdiscipline of industrial archaeology, it will someday be necessary to develop a ranking scheme for screening sites (Heite 1990a:115-117).

Toward that end, some questions might focus the issue of significance in terms of the archaeology and history of industry:

1. What was the relative historical or economic significance of this industry, expressed statistically, during the period represented at the site?
 - a. What percentage of the state's workforce was employed in this industry?

- b. What was the dollar value of output from this industry during the period in question?

- c. How many establishments existed during the period in question?

- d. Is this operation representative, or an exception?

2. What are the technological landmarks in the history of this industry?

- a. Does this site exemplify one of the technological landmarks?

- b. Did this site or its operators participate in a technological innovation that was to be significant in the history of this industry?

3. What innovations in the history of this industry occurred, or are represented, in Delaware?

- a. Are these innovations represented at the site in question?

- b. How many Delaware sites contain expressions of these innovations?

4. Compared to the integrity of the other sites in Delaware, what is the relative integrity of this site?

5. Can this site yield information about labor relations or working conditions?

- a. Is there evidence on the site to shed light on labor-history issues, such as:

- automation

- unionization

- industrial hygiene

- machine-operator safety

- ethnicity

- gender

- b. Can the site yield information concerning diet, living standard, or family structure of workers or their relatives?

These five questions touch upon all four of the National Register criteria, the most obvious of which is criterion D, a site's ability to provide historical or archaeological information.

Significance on any industrial site should be evaluated in terms of data quality, a concept of integrity that is used effectively in Delaware to evaluate prehistoric sites (Custer 1986:188). If the purpose of registering any archaeological site is to recognize our need to obtain information it can provide, it follows

that industry-wide data quality should be a primary consideration in the evaluation of any site.

For example, we have exhaustive, high-quality, information (good data quality) on the grist mills of Delaware, but our surveys have recorded almost nothing (poor data quality) on pit sawing. Saw pits are therefore a higher priority, under criterion D, than grist mills, because any saw pit can increase knowledge to a greater extent than any grist mill.

RECOGNIZING INDUSTRIAL QUESTIONS

Evaluations of significance under criterion D are possible only if one first recognizes the existence of evidence, and the possibility that the evidence might be useful to someone. Since industrial archaeology is interdisciplinary, it is, by definition, impossible to assess any site's potential information value within the confines of a single academic specialty.

An example of this tendency to ignore the possibility of interdisciplinary questions occurred a few years ago. A 200-foot segment of the New Castle and Frenchtown Railroad right-of-way was about to be destroyed. The property is listed in the National Register, but it was destroyed without test excavation. The investigators noted, "... since it consists solely of the bed on which the stone sleepers and rails were originally laid and later removed, it does not have associated archaeological materials." In other words, railroad beds are, by declaration, not archaeologically interesting (Lothrop, Custer and De Santis 1987:99).

In fact, the site was the place where experimental rail on wooden crossties were installed on one track, next to another track with the older system of iron rails on stone sleepers (Holmes 1962:178).

The wooden railway was built on a line of parallel pine sleepers or mud sills buried in the right-of-way. Crossties were laid on the mud sills, and a wooden rail was attached to the crossties. A piece of strap iron was commonly attached to the wooden rail to take the beating from the rolling stock. Whereas an English railroad on stone sleepers cost \$180,000 per mile to build, a wooden line could be built in America for \$20,000 to \$30,000 (White 1976:38-39).

Strap iron rails had earned a bad reputation for durability and safety even then. The New Castle and Frenchtown introduced experimental two-piece iron rail, which proved more durable (Scharf 1888:429).

This innovation ultimately facilitated the expansion of American railroads across the continent, freed from dependence upon expensive stone sleepers. Because the railroad operated for only two decades, this particular roadbed should have suffered few changes and rebuildings. Investigation in the right-of-way could have provided valuable information about the development of an innovation that profoundly affected our national growth.

Examination of the roadbed could have provided design details of the innovative mud sills and crossties, but more importantly could have revealed changes, rebuildings, and problems that were not documented. Experience has demonstrated repeatedly the gap between written engineering records and actual field conditions uncovered archaeologically.

The importance of studying this, or any, undisturbed historic section of early railroad would have been obvious to an industrial archaeologist, but none were consulted.

In contrast to Delaware's ambivalence, New Jersey's preservation office mandates excavation of railroad sections, ranging from the pioneering Camden and Amboy to the Trenton-Princeton light rail electric line (Jonathan Gell, personal communication; Bello and Grubb 1988).

In Maryland, Hurricane Agnes revealed several experimental sections of the original Baltimore and Ohio roadbed, which was reported by industrial archaeologists. Even though the experiments had been documented 160 years ago, unrecorded details were revealed by industrial archaeological examination (White and Vogel 1978).

If industrial archaeological remains are to receive attention in Delaware equal to their historical importance, the planning process must explicitly include the tools of industrial archaeology. Usefulness of any evidence can be assessed only after it has been recognized, which is not always the case.

ABOVE-GRADE ARCHÆOLOGY

As the Secretary of the Interior's guidelines point out, "Archeological documentation may be an appropriate option for application not only to archeological properties, but to above-ground structures as well, and may be used in collaboration with a wide range of other treatment activities." (*Federal Register*, volume 48, number 190, Thursday September 29, 1983, p. 44736).

Standard practice today requires that standing buildings be evaluated archæologically, on the assumption that the archæological approach can extract cultural information as easily from a building as from a hole in the ground (National Park Service 1985: 38, 72). This concept was considered radical in the extreme when Kenneth Hudson introduced it, 25 years ago.

The landscape itself is an artifact rich in cultural information. Plantings, fencelines, ditches, and even plowscars may eloquently testify to the education, sophistication, and ethnic background of a site's occupants. While formal garden layouts have been lavishly recorded since the earliest days of HABS, only recently have archæologists begun to appreciate the potential value of landscape analysis as a mirror of the human condition (Kelso and Most 1990).

RECORDATION STANDARDS

Above-grade engineering and manufacturing sites are recorded and evaluated within a documentary framework established by the Historic American Engineering Record (HAER), which differs little from traditional, "dirt," archæological documentation (National Park Service 1989).

Although it is an administrative offspring of the older HABS architectural documentation program, HAER is more concerned with the history and technology of its subjects than with superficial appearances. A longtime collaboration with the American Society of Civil Engineers has resulted in the acclaimed HAER bridge documentation program, which chronicles civil engineering, sometimes in a multimedia format (Allen 1983). Delaware bridges were inventoried by HAER, and a later survey with different parameters was published by the Department of Transportation (Spero 1991).

HAER explicitly recognizes "that manufacturing or other processes that took place in the building were often more important than the building itself." An example of this orientation is the report on the Wilkerson brickyard in Milford (DE-5), in which one of the three sheets is devoted to a pictorial flowchart of the brickmaking process (Bruegmann 1983:220). HAER recording teams usually are interdisciplinary, including historians of technology, architects, and engineers.

Documentation may take the lead role in an industrial archæology project. A recent North Carolina archæological project was designed primarily to shed light on patents held by a former owner, which were significant in the history of the naval stores industry (Robinson 1991).

ETHNICITY IN CULTURAL RESOURCES

The ethnic dimension of cultural resource surveys can be narrowly restricted or broadly misapplied. In only a few cases has ethnicity played a major role in Delaware survey designs, but most surveys, intentionally or unintentionally, focus on specific ethnic and social groups.

Prehistoric studies deal exclusively with long-dead native Americans, which is logical in view of the fact that they were the only people who were here during the period.

Less logical is Herman's assertion that his book on Delaware rural architecture represents a "cross-section" of rural life in central Delaware. In spite of its claim to universality, the book deals exclusively with the works of prosperous white males, who were in fact a minority (Herman 1987:10).

Delaware cultural resource surveys seldom focus on the ethnicity of site creators, but there have been exceptions. A Nanticoke Indian survey in Sussex County resulted in registration of a group of buildings with ethnically identifiable builders. On Wilson's Run in New Castle County, inclusion of stone walls in a project area prompted discussion of the Italian stonemasons who built them (Heite 1992).

Opportunities to archæologically identify material manifestations of ethnicity have been missed, sometimes because other evidence of ethnicity seemed more easily obtained. Mere existence of a coherent ethnic

enclave has been sufficient to declare a site's significance, without marshalling cultural information potentially available from examination of either buried or exposed artifacts.

The result of reaching broad conclusions on scant evidence is a hollow and self-limiting survey that succeeds in labelling resources without fully assessing their ethnic significance under criterion D.

Belltown, an African-American enclave near Lewes, was found eligible for the National Register under criterion A, because of social continuity reaching back to the early nineteenth century, even though most of the standing built environment belongs to the present century (John Milner Associates 1990:63-104).

This continuity, evident from the documentary record but absent from the above-grade remains, could have been demonstrated by reference to below-grade remains. Potential archaeological significance in the Belltown district was dismissed on the basis of sixteen shovel test pits in three tofts. Moreover, there was no attempt to identify physical evidence of the documented voodoo-like cult practices that have long distinguished the community (John Milner Associates 1990:55-59).

Other groups of Delawareans have been lumped. While obvious ethnic associations are irregularly noted in survey input, literature about Delaware historic sites does not contain coherent large-scale surveys of sites associated with particular ethnic or racial groups.

On the other hand, it is easy to define "worker housing" or "tenant houses" or "peach houses" from data provided by existing synoptic surveys (Catts and Custer 1990:34-38). Thematic studies under these titles have been part of the Delaware cultural resources program since it began.

Such classifications reflect the dominant culture that built the houses, and not necessarily the persons from other backgrounds who used them. Tenant houses, as well as the owners' mansion houses, belonged to symbolic spatial systems that reinforced the dominance of the European-American hierarchy. Any label that describes a position in this hierarchy is, therefore, merely a relative economic or social

determination, and not descriptive of the occupant himself.

Consequently, we have no body of survey data organized or indexed in a way that will permit us to define site-types peculiar to nineteenth-century native American remnant groups, or to differentiate them from blacks, or from any other such divisions of people.

A good prototype for an ethnic property-type survey was an Ohio study. Researchers identified nineteenth-century African-American residents in a predominantly European-American region. These peoples' residences were then mapped and compared to other demographic information. Then "typical" or "characteristic" architectural features were identified and distinguished from housing stock built for the surrounding culture (Brown 1982).

If, on the other hand, the housing stock is not originally designed and built to reflect the self-perceived needs of the resident culture, it becomes necessary to study the features the residents add to the imposed housing. Urban settings in and around Wilmington have yielded considerable artifact data about ethnic urban neighborhoods, but the buildings themselves possess little interest in this regard (Goodwin 1986:33, 42, 108).

Poorly-endowed groups, notably slaves and groups represented largely by poor people in cities, were compelled to reside in domestic settings imposed by the dominant culture. Some of the imposed housing types did not conform exactly to a resident group's concept of a proper home, and modifications occurred. These modifications might be as obvious as the placement of yard ornaments (Sciorra 1989), or as subtle as the distribution of activities within component parts of the toft.

Too frequently, academically qualified architectural surveyors with an art-historical orientation have dismissed ethnic adaptations as "tacky" intrusions that compromise a property's integrity. Instead, such changes are integral to understanding a site's history (Bishir 1984:12).

If a standing structure is evaluated archaeologically, rather than merely architecturally, such adaptations logically should be evaluated as culturally significant

artifacts, contributing to an understanding of the property, and not merely as intrusive later decorations.

Archaeological treatment of ethnicity in above-ground resources is an established and proven methodology. Archaeologist Jo Ann Cotz, as part of an industrial archaeological project, studied ten lots in a workers' housing area called Dublin, Paterson, New Jersey. She observed that the original Irish owner-occupant builders had conformed roughly to a community standard, but with individual variations. Changes wrought by each successive ethnic group could be traced in the architectural artifact inventory. Remarkably, the report contained only passing reference to excavated materials, even though the study was published in an archaeological journal (Cotz 1975).

Leland Ferguson's archaeological and ethnographic study of slave-occupied antebellum sites recounts the friction between African concepts of housing and the buildings imposed upon slaves by masters. By finding elements of African house types and spatial organization in slave dwellings, Ferguson was able to give meaning to otherwise ambiguous documentary references, and to attach significance to peculiarities of slave housing that had gone unrecognized (Ferguson 1992). Other archaeologists interpret the architecture of slave dwellings as an expression of owners' ideology imposed on a subject group (McKee 1992).

It is clearly possible to determine, through archaeological survey, spatial and architectural patterns that define a particular ethnic group's domestic arrangements, value systems, and taste. As Ferguson, Cotz, and others have shown, it is first necessary to identify those attributes that could have been controlled by the subject group, and then to determine, by survey, how those characteristics were manipulated in an ethnically peculiar way that can be recovered archaeologically.

A remarkable example of artifact patterns yielding ethnic evidence occurred in recent re-analysis of formerly reported London medieval Jewish sites. By reviewing the artifact assemblages from several sites, the researcher found a Jewish artifact pattern

as clearly defined as South's Carolina pattern (Pepper 1992).

ETHNIC RESOURCES IN DELAWARE PLANS

Delaware's "framework of historic context elements" (Ames, Callahan, Herman and Siders 1989:21) is arranged according to a group of 18 themes, ten of which refer to occupations, such as forestry and manufacturing.

The other eight themes, classified under "cultural trends," refer to diverse aspects of human activity, such as religion, major families, and engineering, with no apparent internal organization among them. Ethnicity is absent as a separate theme, but is discussed under "11. Settlement patterns and demographic changes," which is identified in the state plan as the highest priority for planning purposes.

Since ethnicity is as universal (and probably as ancient) among mankind as bipedalism, it is a logical way to organize surveys. However, if ethnic data was not systematically gathered during the collection phase of a survey, it is nearly impossible to extract ethnic information after the fact, from inadequately designed survey data.

Sites with ethnic significance, including the buildings on them, may be eligible for registration as possible sources of information under criterion D, if

1. there is documentation of ethnic affinities that unite a group of properties; and
2. integrity is sufficient to potentially provide data on distinctive ethnic traits.

These data requirements are similar to the data required under other historical archaeological categories by the state plan.

ARCHAEOLOGY OF AGRICULTURE

In the first report of this project (Heite and Blume 1992:80-97), the authors discussed the archaeological potential of agricultural features. In that report, it was suggested that examination of a field might shed light on the economic and educational levels of the farmer. Drainage structures, plowscars, fertilizer residues, hedgerows, and artifact scatters might provide valuable social or cultural evidence.

Toward this end, British industrial archaeologists have applied their techniques

and approaches to agricultural sites with some success. A study of the industrial archaeology of farming in England and Wales (Harvey 1980) identifies nine areas of archaeological investigation as chapter heads:

- Reclamation of waste
- Fields and field systems
- Water supplies and irrigation schemes
- Sources of fertility
- Field drainage
- Historical crop varieties
- Historical breeds of livestock
- Tools, implements and machines
- Farm buildings

These chapter headings could be adopted as a framework for developing a specifically agriculture-oriented industrial-archaeological thematic study.

Gentrification, an important theme in Kent County history during the eighteenth century, took a practical turn during the nineteenth century. The gentry kept in touch with ideas from throughout the world. Educated and worldly, they were likely to introduce new fashions quickly. They sent their children away to schools and bought their clothing in the cities (Heite and Blume 1992:22).

During the nineteenth century, the educated and worldly-wise elite turned their attention to agriculture, and introduced new tools and techniques. These "book farmers," as they were sometimes called, should have left their imprints on the fields.

Innovations included the introduction of hedge plantings, new cultivation equipment, ditching systems, draintiles, and new crops, all of which should leave an imprint on the archaeological record. Plow scars might betray the exact type of tillage equipment being used. Soil chemicals and the remains of manure can speak volumes about husbandry practices.

Each introduced plant species has a story to tell about the farmer who planted it. Osage orange in the hedges almost certainly was planted during the early nineteenth century. White mulberry trees were planted during the silk craze of the first half of the nineteenth century. Even grass species can be traced to specific introduction dates through the agricultural literature.

Such features could testify to the social and educational level of the farmer. If

acceptance of technological change is a badge of the nineteenth-century gentleman farmer, absence of change may indicate the opposite.

However, survey data is not yet sufficient to compile a valid social and class scale that can be applied to agricultural remains. In order to use this valuable class of data, it will be necessary to accumulate more input than is currently available. Cultural resource studies should gather agricultural data, so that someday it can be evaluated against a meaningful data base.

Agricultural remains, such as ditches, hedgerows, chemistry, manuring residues, plow scars, abandoned machinery, outbuildings, and other features, should be evaluated under criterion D, like any other archaeological evidence, above-grade or buried. To exploit the information potential of agricultural technology sites, the classic industrial archaeology collaboration of an archaeologist and an historian of agricultural technology is indicated. The outcome, while archaeological in format, should address the research requirements of the agricultural historian.

ETHNICITY, STATUS, AND AGRICULTURE

In the current project area, the community west of McKee Road was farmed by an identifiable and tight-knit ethnic group, the moors, whose farming practices may exhibit distinct characteristics. These characteristics might, in turn, reflect educational level, ability or willingness to obtain up-to-date equipment, and attitudes toward expenditure of labor.

From documents, we know that these people bought unproductive, poorly-drained wasteland and turned it into self-reliant small farms. Their undeniable industry increased the value of their land. Since their fields remain untouched by surrounding suburban sprawl, they are potentially a valuable resource for studies of status, social scale, ethnicity, and agricultural technology. The relatively small project area contains examples from virtually the entire socio-economic scale of nineteenth-century farmers. The project area potentially provides unparalleled opportunity to study *both* agricultural dimensions of historical archaeology and the industrial archaeology of rural occupations.

4. HUMAN HISTORY IN THE PROJECT AREA

PEOPLE MAY HAVE entered the St. Jones valley as early as 12,000 years ago, during the Late Glacial climatic episode. Seasonal variation was not pronounced during this period because of the proximity of the continental ice sheet in the vicinity of what are now the Great Lakes.

PALEO-INDIAN PERIOD

These earliest inhabitants lived by hunting animals, including large game such as mastodons, mammoths, and other Pleistocene megafauna. Because hunting was so important to their way of life, these people were skilled in making flaked stone projectile points, as well as other stone tools for use in processing the meat, hides, and other animal products.

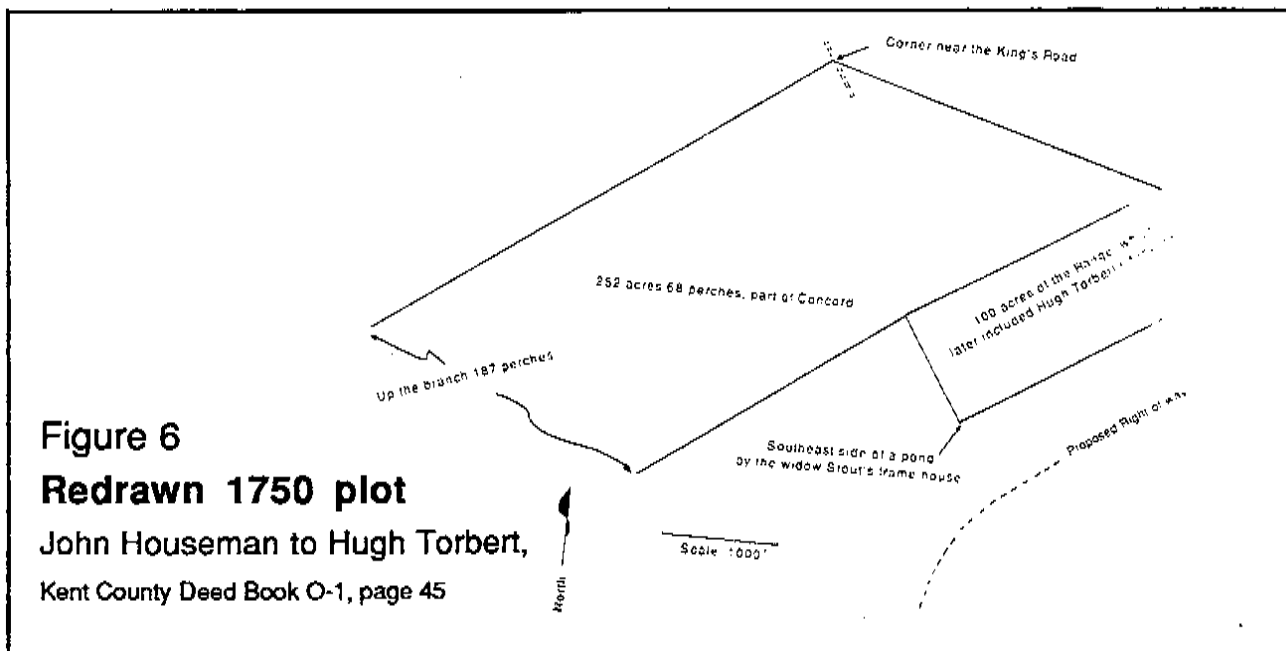
Settlement seems to have been concentrated west of the project boundaries along the mid-peninsular drainage divide. Small scale hunting camps may have existed near swampy areas such as the bay/basins found within the study area, but for the most part, these settings were not occupied until later in the prehistoric period.

ARCHAIC PERIOD

The Archaic cultural period begins about the same time as the Atlantic environmental episode. The disappearance of the glaciers allowed the development of marked seasonal variation, while the rising sea level allowed the development of marshes, increasing the variety of environmental settings available for exploitation. Within the project area, the bay/basin features would have filled with water during this period.

Paralleling this increase in the environmental and seasonal diversity, the Archaic Period is marked by an increase in the number and variety of tools in use. Of particular interest is the introduction of a variety of ground stone tools, including axes, gouges, grinding stones, and other implements for exploiting plant resources.

Within the project area, Archaic Period sites are most likely to occur in association with the bay/basin features, with some procurement sites being found on knolls overlooking river valleys.



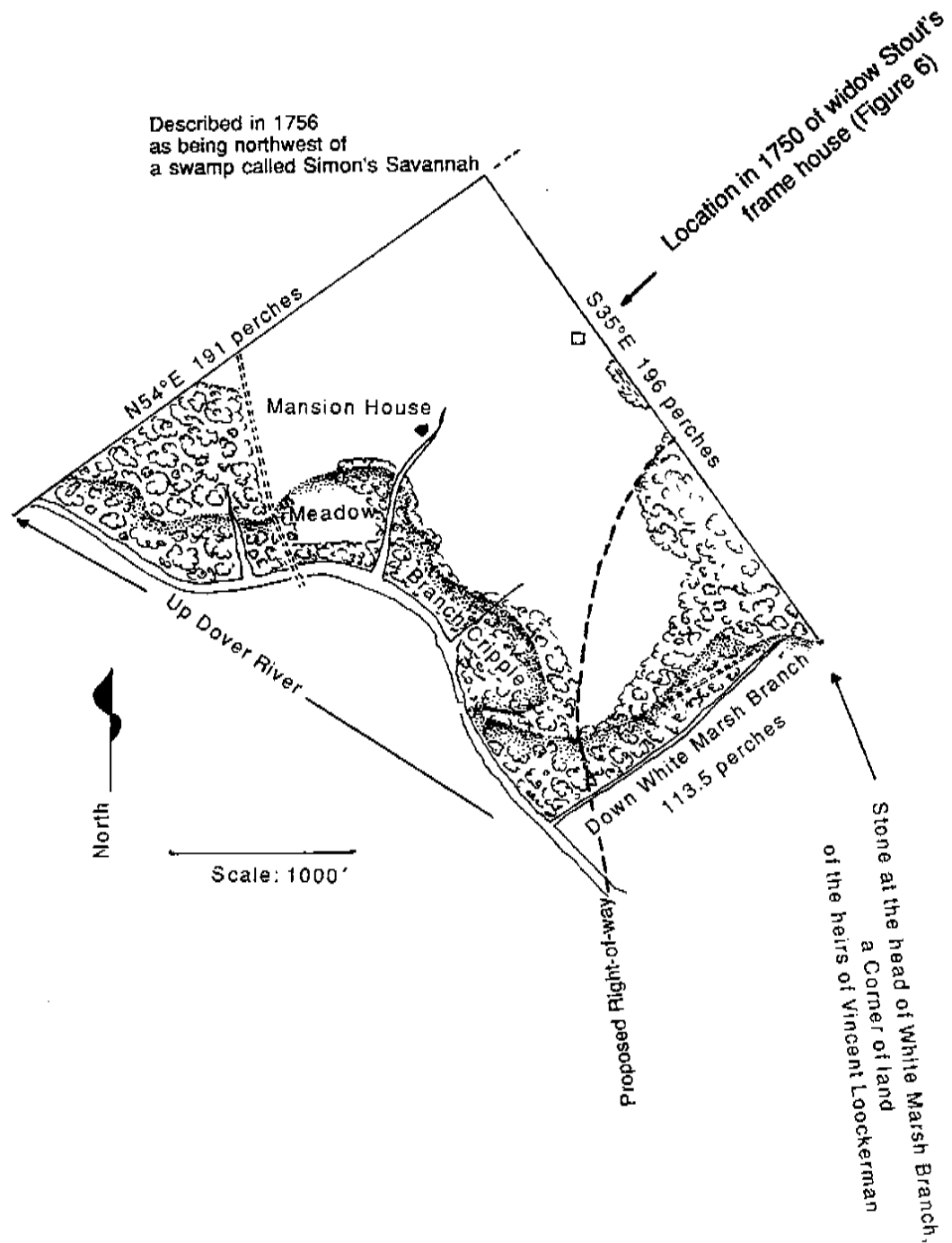


Figure 7
John Ganoe's land, 1805
 Redrawn from Orphans Court Plot Book F, Page 197.

WOODLAND I PERIOD

The beginning of the Woodland I cultural period coincides with the beginning of the Sub-boreal environmental episode, a period in which environmental conditions were generally drier than during the preceding Atlantic episode. There was also considerably more variation in climatic patterns than during previous periods. Large base camps developed in the floodplains of major streams and adjacent to major swamps, where the resource base was more reliable because of the variety of resources available. Many small procurement sites were also established along streams and adjacent to bay/basin features. In general, the focus appears to have been on the utilization of a wide variety of resources. This is reflected in the introduction of specialized ground stone tools and in the introduction of stone bowls, and later, of ceramic vessels.

In the project area, a variety of large and small procurement sites are likely to be found, as well as an occasional small base camp. Both headlands overlooking the Fork Branch floodplain and areas adjacent to bay/basin features are likely to have been used for settlements during this period.

WOODLAND II PERIOD

The beginning of the Woodland II period is marked by an change in emphasis, rather than by any dramatic change in cultural patterns. Base camps continue to grow in size, but procurement sites are smaller and fewer in number. The tool kit is less varied than it was during the Woodland I period, but the frequency of storage features has increased, even in smaller sites.

It is likely that the project area was used only for small scale hunting forays. Small procurement sites can be expected, particularly in the wooded fringes along the stream valleys.

CONTACT PERIOD

The contact period is the time of initial contact between European colonists and Native American groups. It begins with the first, indirect experience of Delaware Native Americans with European trade goods and diseases and ends with the disappearance

from Delaware of Native Americans as recognizable tribal groups. It is likely that sites of this period will not be easily distinguished from sites of the Woodland II period.

COLONIZATION

Even though the area was not colonized during the Dutch period, several families in the project area bore Dutch ancestry, including such families as Loockerman, Comegys, and Boyer. After the English takeover, settlers from Virginia and New England came into Kent County; among the Virginia immigrants were some who proposed around 1670 to establish a town at the mouth of St. Jones River.

Their effort failed, and Kent County was without a proper settlement for another fifty years, forty years after the county's court was established in 1680.

By then, claimants had taken up land along St. Jones Creek [Dover River] as far up as the head of tidewater at the present site of Dover. The most attractive unclaimed frontier lands still available lay on the inland levels along the main freshwater streams, including parts of the project area.

William Penn's accession in 1682 sparked a new land rush, as his Quaker associates moved into the Delaware Valley in large numbers.

Simon Hiron, who had settled the Chipping Norton tract on Muddy Branch, east of the project area, claimed two tracts, called Range [1000 acres] in 1682 and Concord [670 acres] in 1691 on the headwaters of Dover River. Another early claimant was Jane Bartlett, who took up a tract called Virgin's Choice in 1681 in the area later known as Fox Hall (Scharf 1888:1083).

Under the Dutch and the Duke of York, local courts had taken charge of parcelling out the unclaimed land, but the new proprietor soon concentrated authority in his own land office at Philadelphia. The ensuing period was marked by large grants to Philadelphia merchants and speculators, including members of the Penn family, who

effectively controlled the interior of Kent County for another century.

Nicholas Loockerman (1697-1769), scion of a wealthy New York Dutch merchant family, moved to Kent County about 1723 and established himself as an extensive planter on part of Hirons' Range. Within a few years, he had acquired extensive lands on both sides of the headwaters, some farmed by tenants and some cut for timber. He built a sawmill near where College Road crosses the head of Silver Lake (Scharf 1888:1081-1082).*

THE NORTH [DENNEY] PORTION

The present DelTech Terry Campus and Kent Vo-Tech properties occupy much of the farm where Benjamin Stout lived. His widow's frame house was located in 1750 just east of the present main college building, on the present campus property (FIGURES 6, 7, 8). After Mrs. Stout died, their son Emanuel consolidated his title to the farm in 1752. He then traded it, in 1756, to Lewis Ganoe in return for Ganoe's home place.

Three generations of the Ganoe family owned the farm. John Ganoe, apparently a son of Lewis, died intestate, and in 1805 the farm became the property of his brother Lewis, whose non-resident children in 1824 sold it to Thomas Denney, who died shortly thereafter.

Both the Ganoe and Stout families were among the developers of Fast Landing [Leipsic], on Little Duck Creek [now Leipsic River] at the eastern end of the present Denney's Road. This road was to become a local collector, running from a mill at the head of Maidstone Branch to tidewater; when the Delaware Rail Road was built, DuPont Station was established at the grade crossing.

Thomas Denney was in the process of assembling a sizable farm by purchasing parcels from heirs of former residents. In 1803, he bought an adjacent parcel that had been in the Torbert family since 1750 (FIGURE 6). Between 1805 and 1828, the

farm's mansion house site was relocated from a branch of the river, where Ganoe had lived, to a site by Denney's Road, possibly reflecting the trend toward road orientation.

Denney chose to face Denney's Road rather than the state road (now U. S. 13). This choice can be attributed to the fact that roads connecting landings to the hinterland were more important than the north-south road to Philadelphia, since most long-distance commerce travelled by water.

The farm passed in 1828 to James Denney, whose son, John P. M. Denney, inherited it in 1845. John lived on the farm, and in 1871 bought the former Torbert parcels from his cousin Charles Denney. At his death in 1890, John P. M. Denney left both tracts to his daughter Allie P. Moore.

Her heirs in 1936 sold the properties to Frank Wright, who in turn sold the property west of Route 13 to Jacob Zimmerman, Inc. This transaction included parts of both Denney farms. In 1971, Jacob and Charlotte Zimmerman conveyed most of the land to the State of Delaware.

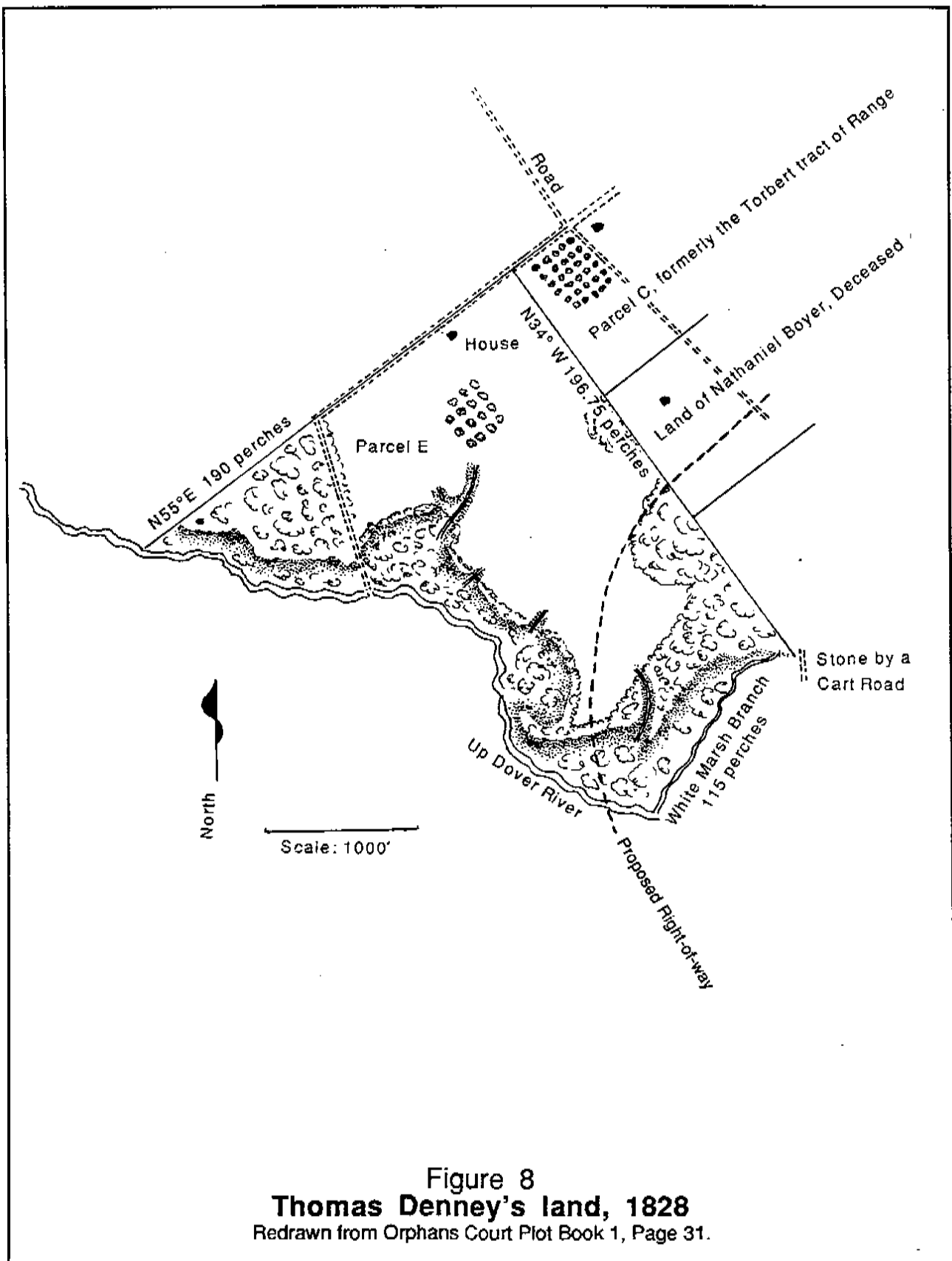
Locations of the Stout, Ganoe, and Denney houses up to 1828 are known from surveys. A later Denney farmstead, still visible in the USGS map (FIGURE 1), was obliterated by construction of the original college. Foundations apparently associated with this later toft were encountered during the recent construction of a wing on the rear of the college building.

THE LOOCKERMAN ESTATES

When Nicholas Loockerman (1697-1769) arrived in Kent County about 1723, he began a land acquisition program that his only son Vincent (1722-1785) continued vigorously.

In 1757, Vincent bought a piece west of the river and part of the Range, 150 acres, from heirs of David Griffin, a Philadelphia joiner. In 1764, Vincent bought 89 acres west of the Dover River from Edmund Badger, a cordwainer, who had inherited it from his father. These tracts, and others, were bought from absentee owners, generally heirs of Philadelphia people who had invested in Kent County real estate during the first generations of the eighteenth century.

* For references and a complete title descent, see Appendix 3 of the file copy of this report at the State Historic Preservation Office, Dover.



Vincent Loockerman and his wife Susannah had one son, called Vincent the younger. After the death of his first wife, Vincent, the elder, married Elizabeth Pryor, who was to bear him two additional children, Elizabeth and Nicholas. He provided for his first son, Vincent the younger, by granting him a life estate in all his land in Dover Hundred. This life grant was converted into an outright gift in 1782.

The 1782 deed described 500 acres, assembled from several parcels, west of Dover River and east of Charles Ridgely's Fox Hall tract, including the Badger tract and the Griffin purchase among others. The south boundary was Spring Branch, a stream that crosses McKee Road south of College Road today. Four tenants were identified in the deed. This tract contains all the project area that lies west of the river.

When Vincent the younger died, his daughter Susannah inherited the tract, estimated to contain 746 acres. An Orphans Court valuation in 1796 described two

miserable tenant farms, one containing 100 acres arable land farmed by William Farmer, a Negro. Near Fox Hall was an un-fenced farm with 50 acres and an old one-story house, plus a 20-acre field that was to be combined with it. Four tenants in 1782 had dwindled to one tenant and an unrented farm fourteen years later.

Susannah also was a non-resident landowner. While still a minor, she married James Stoops of Philadelphia, and died without reaching her majority. Her share in the paternal estate was divided into shares among her siblings, Sarah, Elizabeth, and Vincent. The middle section, 286 acres, fell to her sister Elizabeth, who married Thomas Davy of Philadelphia.

Improvements consisted of a one-story log dwelling covered with weatherboards, and two or three old out buildings in the tenure of Samuel Burkalow.

After Elizabeth Davy died, Thomas sold the tract to John Pleasanton .

5. DEVELOPMENT OF THE PLEASANTON TRACT

IN 1818, JOHN PLEASANTON bought 286 acres in Dover Hundred from heirs of the wealthy Loockerman family. The property had been described in 1804 as containing only a one-story weatherboarded log dwelling and "old" outbuildings. It clearly was not a prosperous farm.

The tract had never benefitted from resident ownership. During most of the eighteenth century, it belonged to three generations of the Loockerman family, whose home place was the present Loockerman Hall on the nearby Delaware State College campus.

East of the river, where the former Loockerman mansion still stands, farmland was high, flat, and well drained. West of the river, in the project area, much of the acreage was freshwater wetlands, producing little more than hardwood timber and scattered subsistence plots for tenants. In 1796, only 20% of the land was cultivated. Geography forced agriculture to take the form of small well-drained patches surrounded by wooded wetlands.

Pleasanton's tract was separated in 1804 from the larger Loockerman holdings during the division of the estate of Susannah Stoops, daughter of Vincent Loockerman the younger. Because Susannah died a minor with no surviving children, the law provided that her siblings, rather than her husband, should inherit her property. Her sister, Elizabeth Davy, inherited 286 acres in the middle of the Stoops property. By the time the property was sold to Pleasanton, Loockerman heirs had lived in Philadelphia for two decades; the property had suffered all the indignities of absentee ownership.

During Pleasanton's twenty years of ownership, the property received some attention, even though it was not his home place. When he died in 1838, the court divided the tract among his three daughters and two daughters of his deceased son. One daughter, Mary DuHamel, received all the arable land except the lot described as being

"lately" in the tenure of Nathan Williams, a free Negro. Her sisters, Eliza Webb and Ann Cabbage, received rear tracts (FIGURE 9).

Ann's 39-acre allotment was hers only during her natural life. Then it passed to her three children and Mary's son. In 1874, the heirs divided it into three parcels.

This process of division among heirs created relatively insignificant small holdings of little value to their absentee owners. The ground was swampy and wooded. Since sawmills stood near the tract, it probably had been heavily exploited for timber. The 1867 Beers *Atlas* map shows only two houses on the whole Pleasanton tract, apparently in the locations shown on the 1840 estate map. Mary DuHamel died in 1877.

In 1881, the county laid out the present McKee Road across the tract. It split the Nathan Williams lot and the Eliza Webb allotment, providing valuable road frontage to landlocked parcels (FIGURE 10).

Mary DuHamel's land was conveyed by her estate in 1882 to her son-in-law William Denney. Two years later, Eliza Webb's heirs sold her 39 acres to Jacob Mosley. Mosley and Denney immediately squared their boundaries and made them congruent with the new road by trading small parcels.

Denney in 1888 sold his mother-in-law's farm to Emory Scotten of Sussex County, whose descendants still own it and reside there. Jacob Mosley began a subdivision process and land reclamation efforts that resulted in a community that still exists west of McKee Road (FIGURE 11).

The last decade of the nineteenth century witnessed new construction on both sides of McKee Road. For the first time, the Pleasanton tract was occupied by its owners. That first generation of owner-occupants eventually bought out the remaining absentee owners and brought considerable waste land under cultivation. They created small farms from neglected wilderness.

Mosley and his neighbors west of the road belonged to a minority ethnic group known locally as the moors, more correctly identified as descendants of Native Americans. Their origin has been discussed elsewhere in this series (Heite and Heite 1985). Their first settlement had been a short distance to the north, at Maidstone Branch and the present town of Cheswold.

For two or three generations the community west of McKee Road remained a moor enclave. Some infill occurred as family

members built houses on the paternal tracts. Eventually, after World War II, the process of estate settlement again ushered in a period of subdivision and ethnic change.

The new residents were African-Americans who created a suburban strip development in the spaces between the older houses. Behind the suburban houses, the agricultural fields that were carved from the swamps by the moors remain largely fallow but undisturbed by development.

Figure 9

John Pleasanton's Land, as divided in 1840

Redrawn from the division plot, Orphans Court Plot Book "1826," page 290

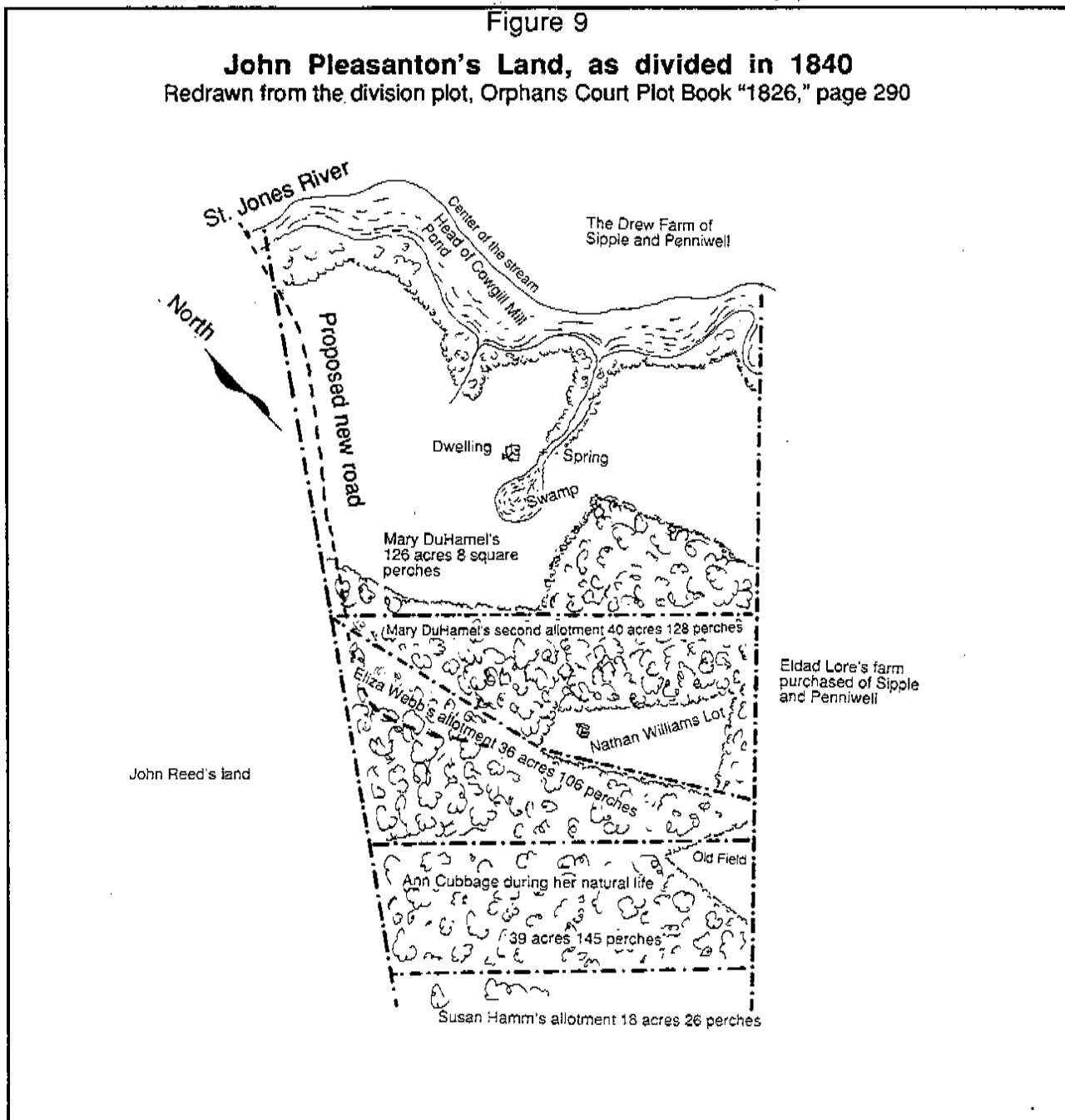


Figure 10

Mary P. DuHamel's Land, Redrawn from 1882 Plot

Orphans Court Plot Book 4, page 247

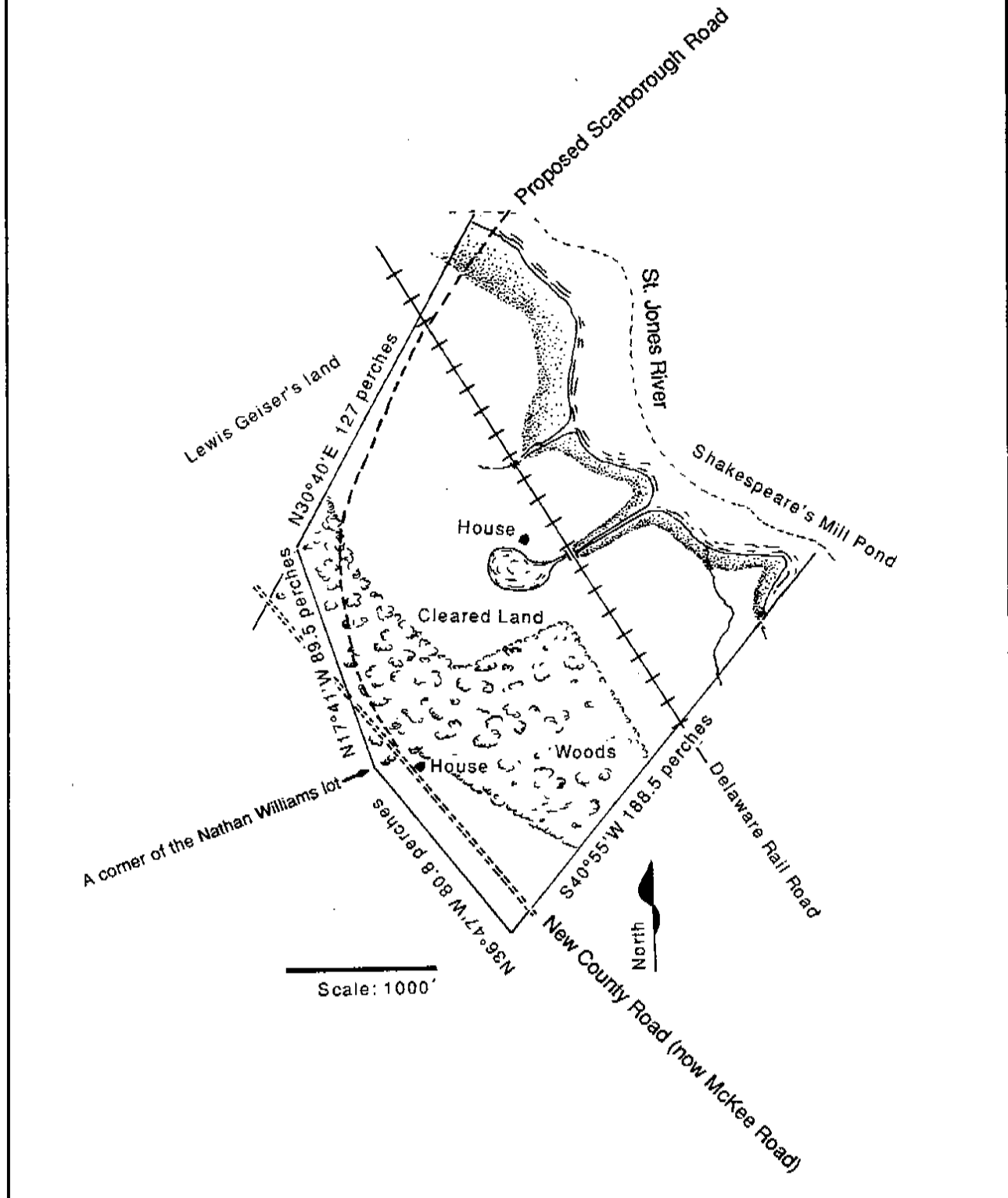
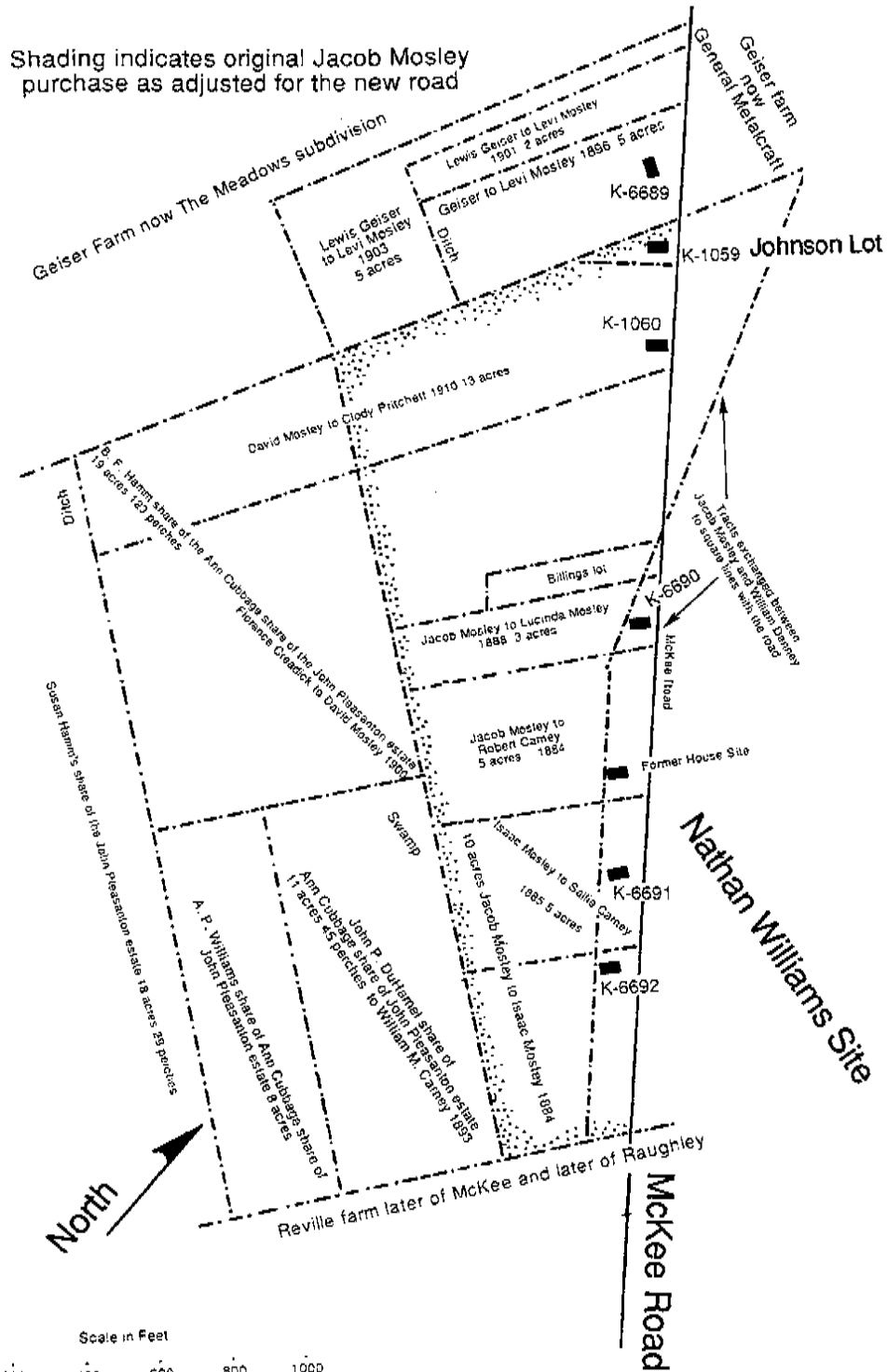


Figure 11 Mosley tract land ownership, 1884-1910

Reflecting construction of McKee Road and the Mosley development, with cultural-resource survey numbers identifying the tofts created after the subdivision.

Shading indicates original Jacob Mosley purchase as adjusted for the new road



6. PHASE I INVESTIGATIONS EAST OF THE RIVER

PREVIOUS WORK IN THE IMMEDIATE vicinity of the project area has included several surveys by the University of Delaware Center for Archaeological Research, as well as one present author's earlier work on other proposed alignments of Denney's and Scarborough roads.

A Phase I survey, the first step in any cultural resource investigation, was conducted over the entire corridor during 1989 and 1990 by Edward Heite. The purpose of a Phase I survey is to identify all cultural resources in the project area.

On the DelTech side of the project area, east of the river, test locations are in old-field succession and under the athletic field. Adverse ground cover conditions forced the use of machine stripping, test squares, and shovel test pits, which are less desirable than surface collection of a plowed field, which was employed west of the river.

TESTS AT TRAILER SALES SITE (7K-C-392)

The easternmost end of the project area has been part of the College property since the campus was established. It serves as a rear entrance and utility right-of-way. Until 1990, it was also part of the adjacent trailer sales lot. Near the highway, the lot is mapped as Sassafra, even though it is heavy with clay and poorly drained.

A house is shown on the 1828 plot (FIGURE 8) in the approximate location of the Larry's Homes office. This house, identified as the Boyer residence, would have stood on a slight ridge east of the bay/basin feature known as Simon's Savannah. Since the northbound lane of the modern Route 13 is the original state road, a considerable amount of frontage has been removed from this site to create the modern roadway.

Three trenches were cut through this area with a Gradall, and numbered ER 53, 54, 55. The trenches were located to cross

the centerline of the proposed road and to cover most of the soil that is mapped as well-drained (FIGURE 13). The three trenches were reported in the earlier publication (Heite and Blume 1992: 84-87).

The first, and most interesting, cultural remains discovered were two ditches parallel to the modern highway. The only dating evidence for these ditches is a slip-decorated red earthenware bowl found in the uppermost fill of the ditch, immediately under the plowzone. A single basal sherd of a free-blown cylindrical green beverage bottle was found in the spoil nearby, but there were no other early artifacts in the trailer sale area.

The roadside ditches were hand-dug, and were filled with dense silt. In the eastern ditch, distinct layering of sediments was apparent, indicating that water had stood in the ditch. Other features uncovered in the trenching included stump holes, round postmolds, and linear soil discolorations that could have been planting beds.

While the site has shed light on small farm practices during the early nineteenth century, it is so disturbed by more recent land uses that it lacks integrity sufficient to recommend it for the National Register.

Although no sites eligible for the National Register were found in the trailer sales area, its excavation provided insights into agricultural practices. This piece of poorly drained ground had evidently been repeatedly ditched and fertilized, in vain attempts to make it productive. These remains may be typical of poor farmers' impact on their marginal soils, testimony to the hardships they encountered.

ATHLETIC FIELD (7K-C-388)

The DelTech athletic field, a high level tract south of the main campus, was initially identified as a high probability area for both historic and prehistoric sites.

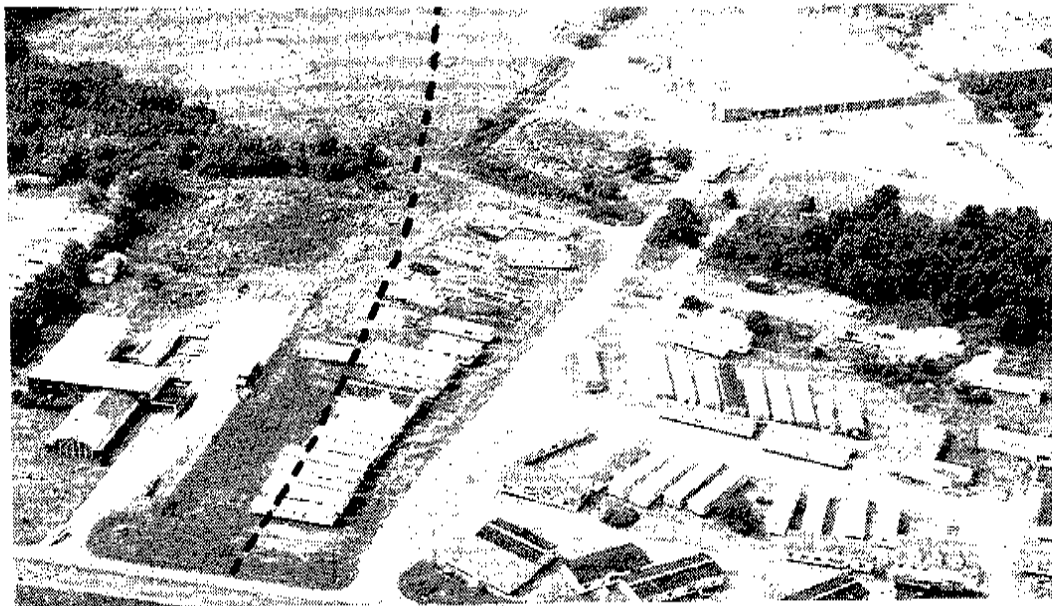


Plate 2
Project area from the air, looking west

Trailer sales in foreground, August 1990.
 The trailers in the center of the picture stand in the area that was later trenched.

Three hand-dug three-foot test pits were opened in this vicinity, on well-drained ground. All soils were sifted through quarter-inch hardware cloth.

The presence of a large number of historic-period artifacts in the topsoil led to the conclusion that this field might have been close to a house site. The soil, mapped as Sassafras, contains considerable clay, causing it to be hard in dry weather and sticky when wet. The largest feature was a relatively recent agricultural drainage or sanitary plumbing pipeline (FIGURE 12).

Machine-dug trenches 57 and 58 revealed very few features. Notable among the features in the athletic field were several perfectly round or perfectly square holes, evidently planting holes. Toward the west, where the soil contains more clay, there was an appreciable amount of charcoal in the fill, indicating that this material might have been intentionally applied as a soil modifier.

No features on the site that would qualify the athletic field for the National Register.

WHITE MARSH BRANCH (7K-C-390)

Near the mouth of White Marsh Branch is part of the DelTech campus that is undergoing old-field succession (FIGURE 14). This spur of well-drained sandy Sassafras soil is a low ridge, surrounded on all sides by ditches or poorly-drained soil.

Well-drained soil at the confluence of two streams is generally regarded as a likely site for prehistoric activity. No historic structures are known to have existed here.

Three tests, all three feet square and numbered 1, 2, and 4, were sunk into the hill, the first two near the proposed centerline and the third 125 feet away.

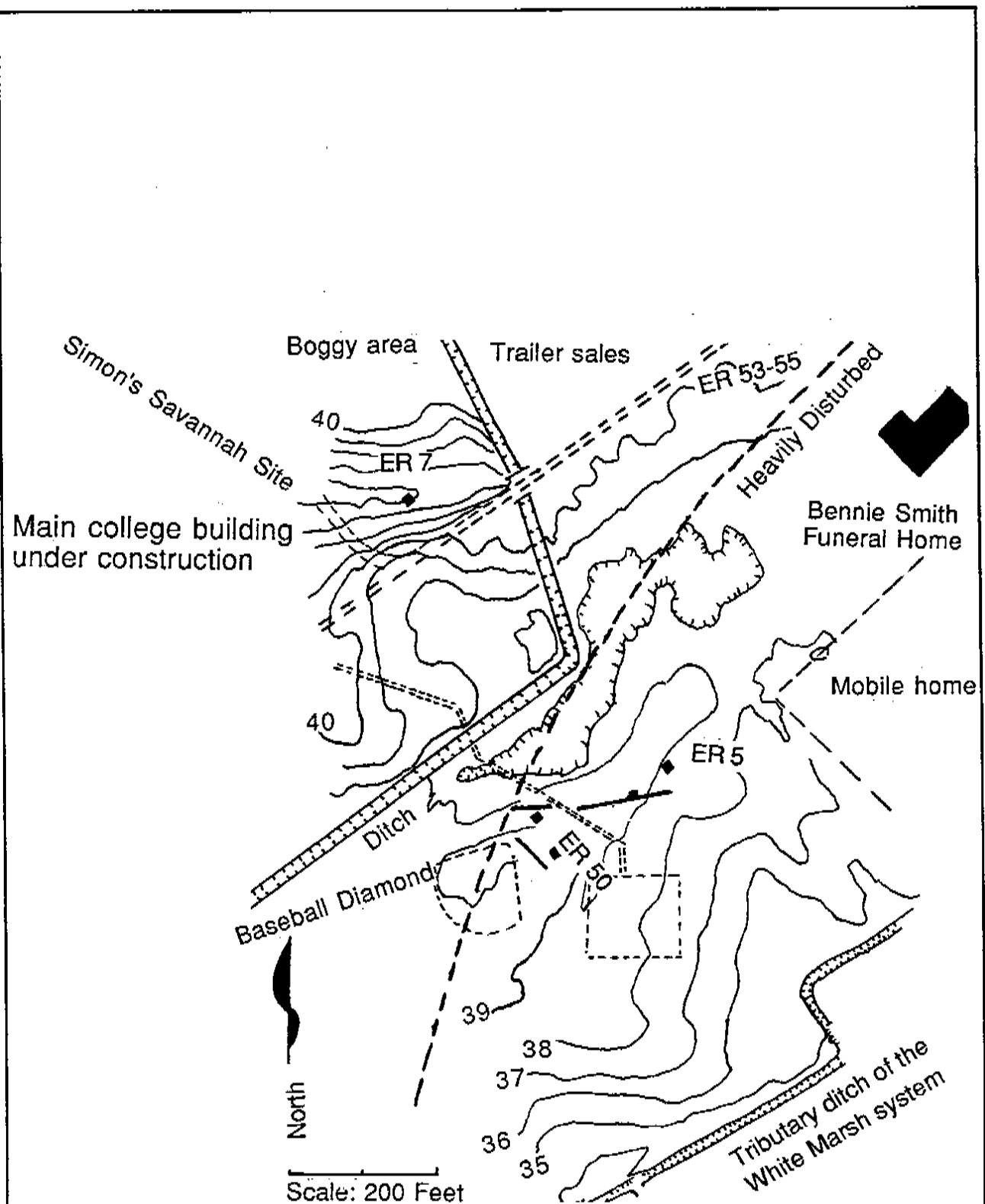


Figure 12
Map of the trailer sales and the athletic field

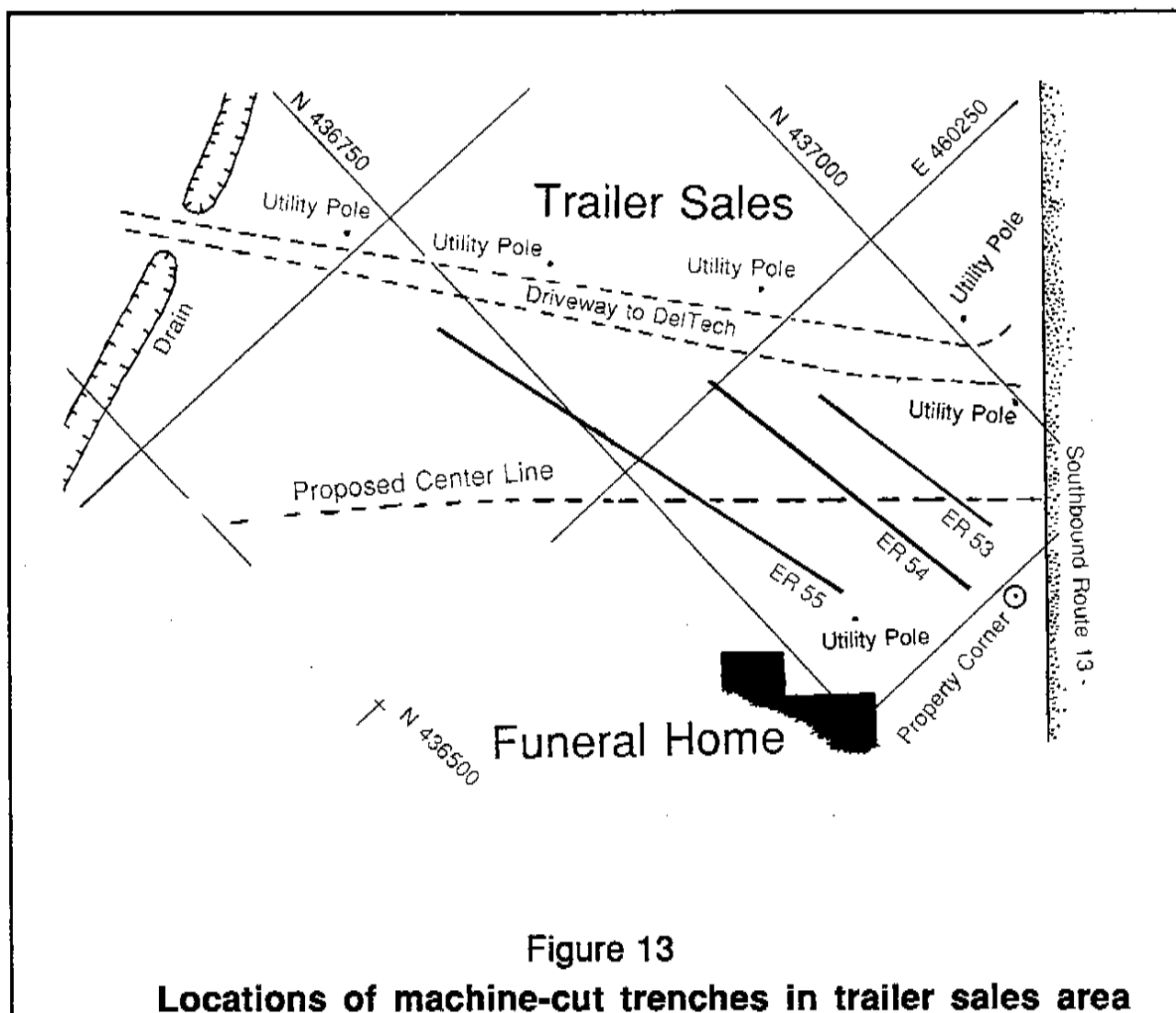


Figure 13
Locations of machine-cut trenches in trailer sales area

In all cases, the soil was a uniform brown sandy loam with few pebbles, the plowzone averaging 9 inches deep over sandy yellow subsoil. Each test was shovelled and the soil was passed through a quarter-inch hardware-cloth sifter.

The small number of prehistoric artifacts found in the three units excavated within this alignment indicate that settlement in this part of the site was not at all intense. Further tests (ER 21-49) delimited the extent of the site to the north and west.

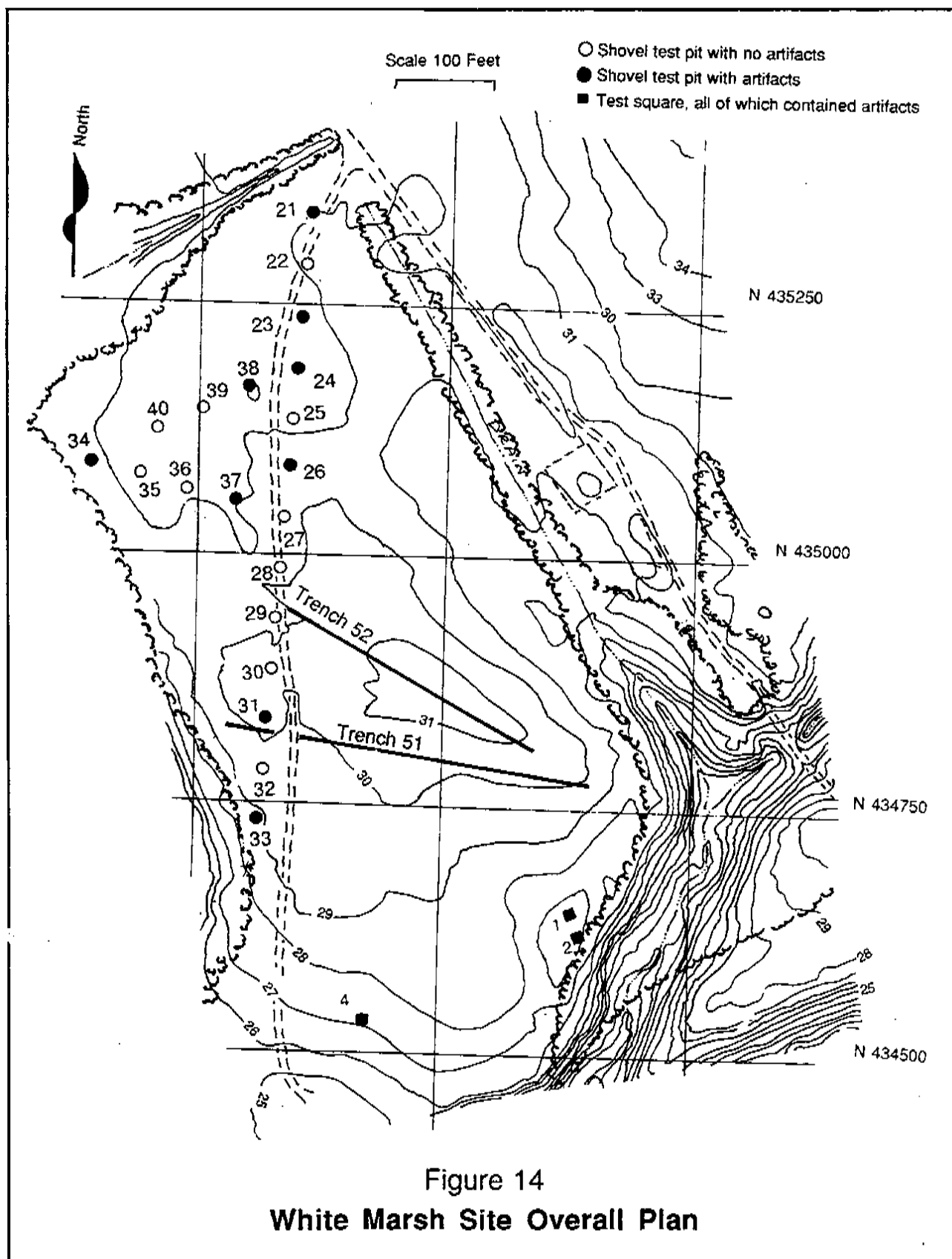
The new road will cross the field between White Marsh Branch and the unnamed ditch that drains the athletic field area. In order to define any concentrations of material that might be found in the field, a

line of shovel test pits, ER 21-33, was sunk at intervals of 50 feet across the field.

Near the north end, where a few artifacts were found, some additional tests were sunk (ER 34-40), for a total of twenty units. This testing revealed two ill-defined concentrations of scattered artifacts, both on slight rises in the hill and near the edge of the bluff.

The paucity of prehistoric artifacts suggests that this part of the White Marsh site was not intensively occupied during prehistoric times. Shovel tests provided no evidence of buried elements.

Agricultural features had been identified in the first tests to the south, indicating that this field might contain useful information about the interaction of agricultural activities and the ground.



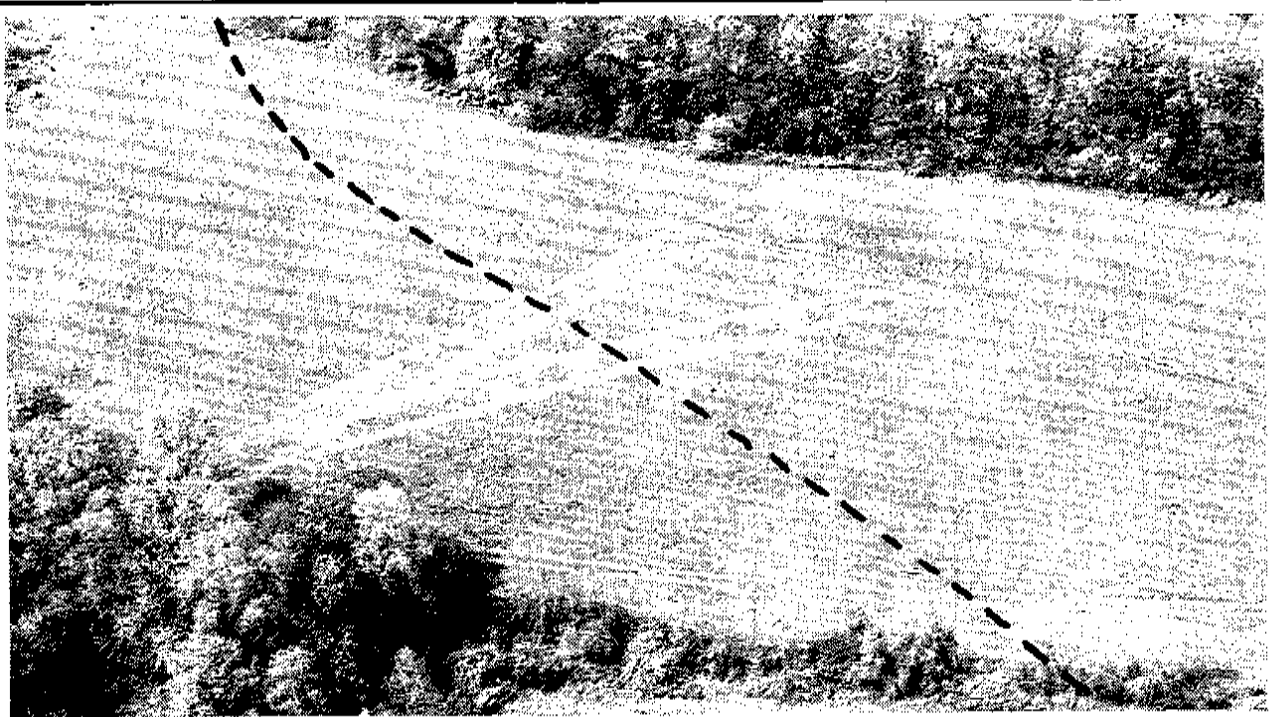


Plate 3

White Marsh site, 7K-C-390, open field part, from the east.

The crop marks are the test trenches, ER 51 and 52.

The dashed line is the proposed center line of the new road.

To investigate possible agricultural features, two machine-cut trenches, ER 51 and 52, were opened on a roughly east-west line across the field at its highest point. Backdirt from the trenches, after being scoured by rain, yielded several more prehistoric artifacts.

Perhaps significantly, no historic period artifacts were found in these trenches through high, sandy, well-drained ground. All the historic period artifacts identified on the field came from shovel test pits (ER 21-40) into the poorly-drained soil near the north end of the field, or the low-lying part near the mouth of the branch. These artifacts consisted of tiny sherds and flecks of brick, indicating a probable origin in domestic trash or compost piles.

Historic-period artifacts at White Marsh were attributed to attempts to improve the poorer soils by manuring. The stark contrast between the historic-period artifact contents of the good and bad soils might guide future researchers in distinguishing

between manuring spread and artifacts directly associated with a nearby dwelling.

These tests have exhausted the information potential of these areas, as we currently understand the archaeology of agriculture. The three sites east of St. Jones River are not significant in terms of the general criteria for evaluating historic and prehistoric sites, outlined on pages 14 and 15.

In terms of the industrial archaeology of agriculture, these areas have yielded information relating to several of the nine areas of interest listed on page 34. In drainage, fields and field systems, and sources of fertility, these investigations provide significant data that will be useful in the long term.

As similar data is collected from crofts throughout Delaware, it may become possible to develop sensitive measures of significance, based on a substantial future data base of thoroughly inventoried agricultural croft sites.

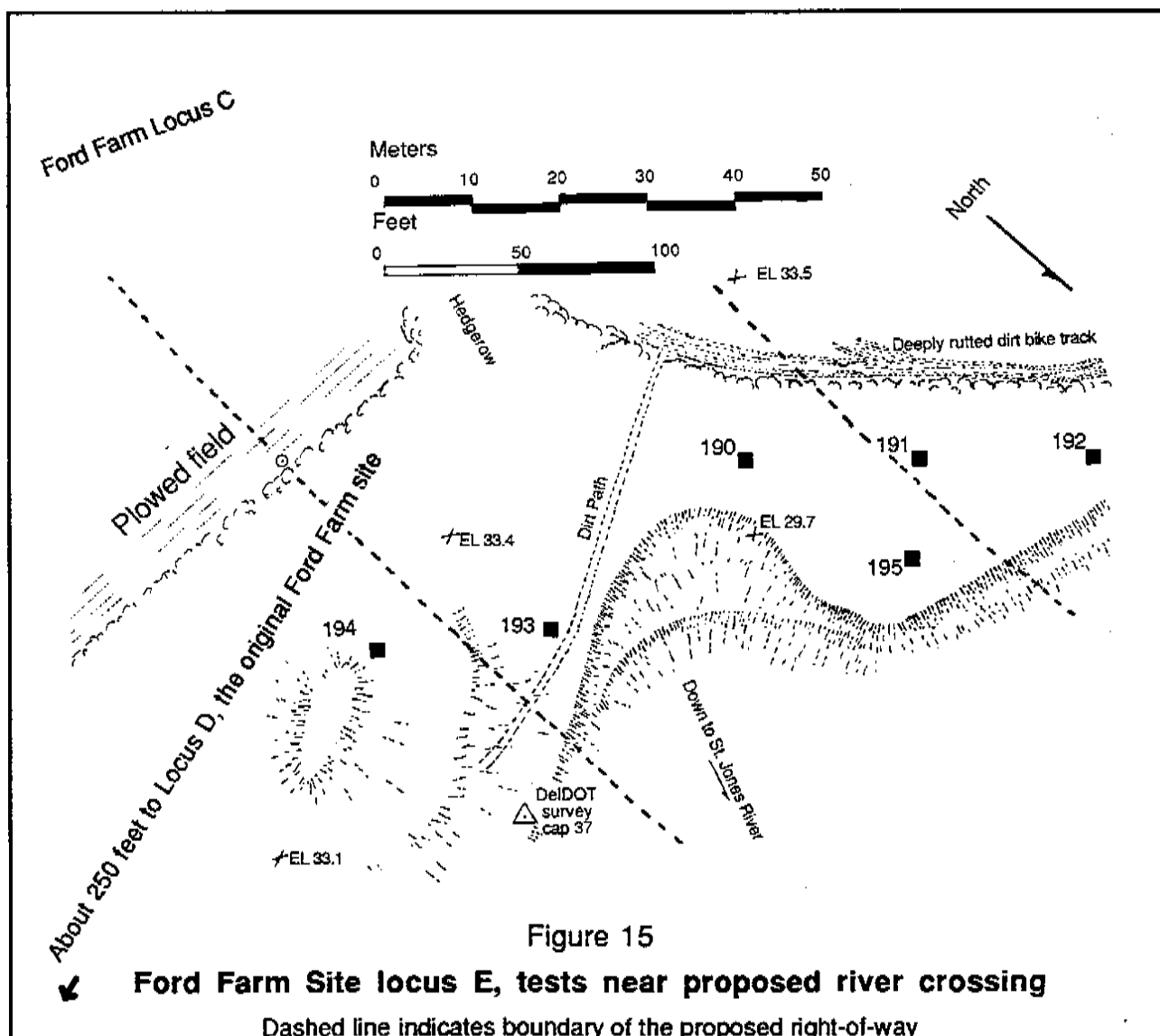
7. FORD FARM PREHISTORIC SITE, LOCUS E

DURING EARLIER SURVEYS, two large prehistoric sites were identified on the west side of St. Jones River, atop steep bluffs overlooking the valley. These sites, Ford Farm locus D (7K-C-386d) and Blueberry Hill (7K-C-107), were judged potentially eligible for listing in the National Register (Heite and Blume 1992).

Ford Farm and Blueberry Hill lay on small sandy hillocks on the bluffs, about 40 feet above sea level and about 25 feet above the river.

The proposed river crossing prompted Phase I investigations between Ford Farm locus D and Blueberry Hill. At this crossing point, the natural elevation was lower (FIGURE 1).

Because the proposed route lay between two known sites, there was a high likelihood that prehistoric artifacts would be found in a similarly deeply-stratified situation, if deep deposits should be found. Artifacts had been observed in the dirt bike track disturbance (ER 198, FIGURE 17A).



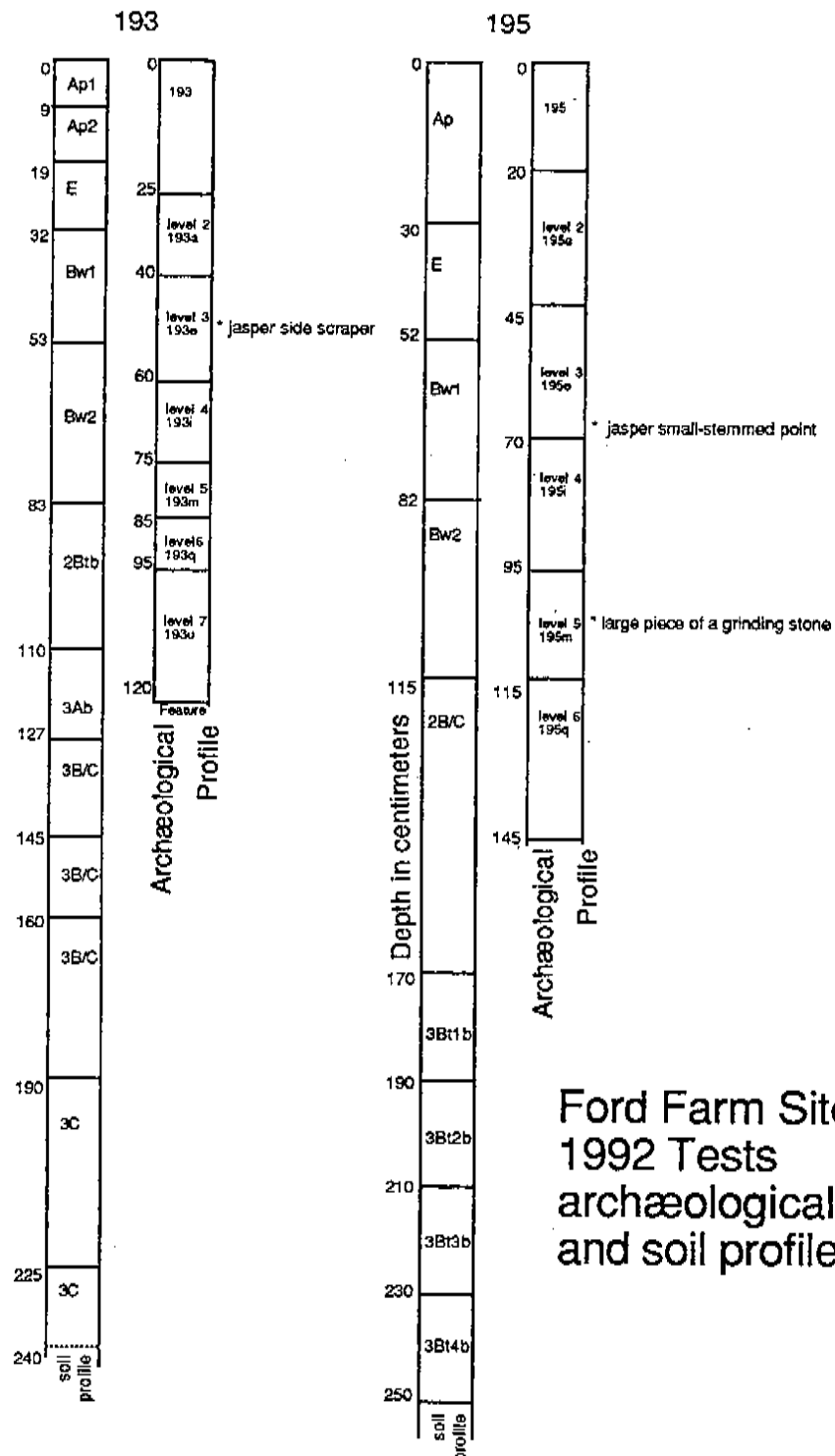
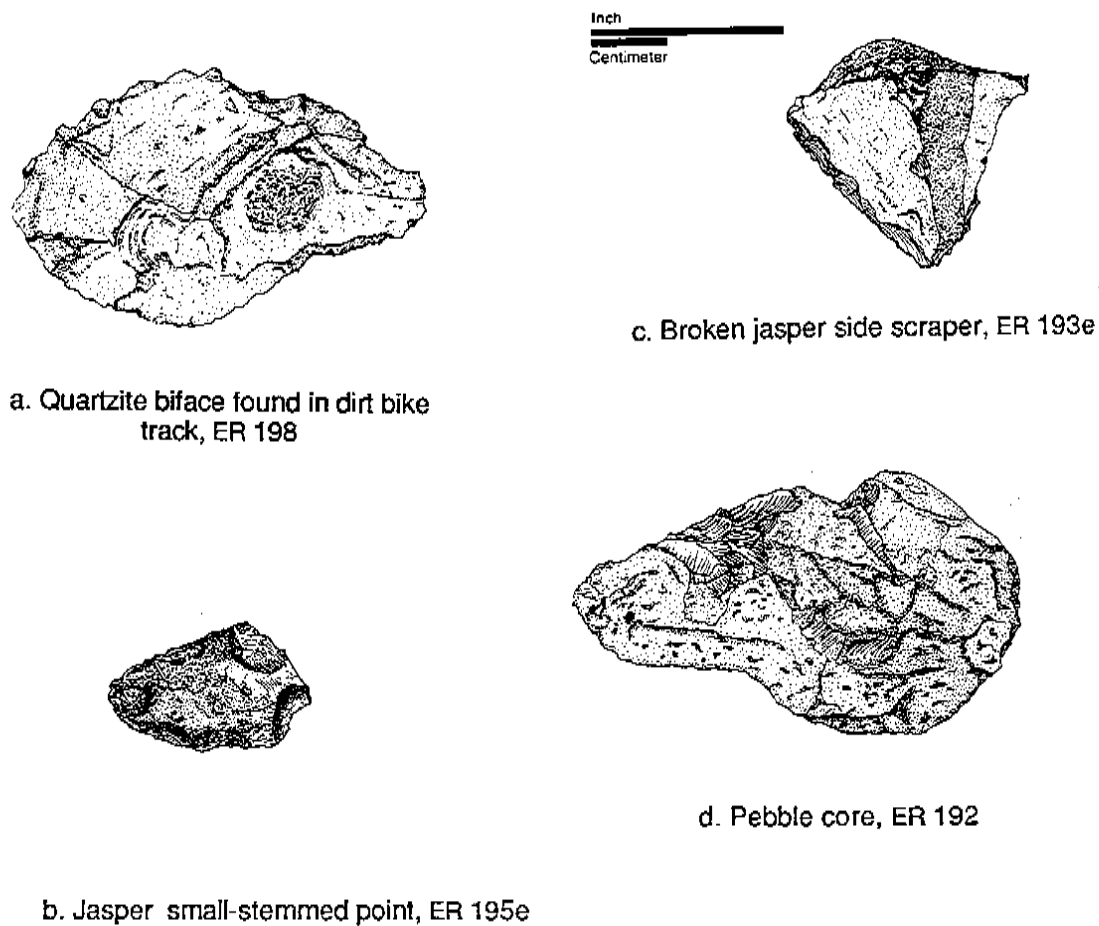


Figure 16

Ford Farm Site, comparison of soil profiles and archaeological profiles

Figure 17

Ford Farm Site, artifacts from the tests at locus E



The soil type is Evesboro sandy loam (EsB), the type mapped at Blueberry Hill and on the original test locus on the Ford Farm site. These are acidic soils that may include Holocene æolian deposits

Phase I testing at locus E was designed to determine if a buried site with integrity actually existed. To fulfill this purpose, the field strategy called for a line of five meter-square test units, spaced to test all the different surviving environments along the bank within the right-of-way. The tests were catalogued as part of the Ford Farm site, which is contiguous. The line of tests crossed the boundary line between the Beiser and Ford properties.

Excavated levels were selected by natural layers. The plowzone was taken off first and segregated. Below this depth, levels were recorded whenever an apparent soil change occurred. If changes were not obvious, a new level was started after 20 centimeters (FIGURE 16).

The middle of the line of tests was the low point, in an apparent natural swale leading down to the creek. The two northerly tests (ER 191-192) were on rising ground. Two tests on the south (ER 193-194) were sunk into the slope that rises toward the center of the Ford Farm site. Each test was a meter square, dug to apparent sterile soil. All excavated soil was sifted through quarter-inch hardware cloth.

Unit 190 lay at the lowest point in the traverse; level 1 was a grey humic plowsoil 20 centimeters deep. It contained a quartz chunk and two fire-cracked rock fragments. The test was taken to a depth of 40 centimeters, with no artifacts below the Ap. Soil scientist John Foss visited the site and examined the profiles. He interpreted the soil to 60 centimeters as a Bw horizon. He augered below that depth to 195 centimeters and found two soil horizons, the upper of which is a B/C horizon with lamellae which change color and thickness below 85 cm. The lower horizon is a medium sand C horizon.

The Ap horizon of unit 191, at a slightly higher elevation, contained chert and quartz flakes as well as heat-reddened pebbles and fire-cracked rocks. All the artifacts were in this top 25-centimeter layer.

The underlying yellow soil was dug to a depth of 40 centimeters without encountering any artifacts.

After the unit was excavated to this level, it was examined by the soil scientist, who probed to 130 centimeters with an auger.

Unit 192, nearer the edge of the bluff and slightly higher, contained more evidence of human activity. The plowzone contained a body sherd of Woodland I period Dames Quarter pottery, a pebble core, and a chert non-cortex flake, as well as four fire-cracked rock fragments.

Below the darker plowzone was a mottled transitional layer that contained two iron nails lying together and a sherd of refined white earthenware. These historic artifacts were unequivocal evidence of agricultural disturbance, lying at the bottom of the A horizon. The next level, between 35 and 45 centimeters, contained no artifacts; Foss identified it as the EB horizon. Below 45 centimeters, Foss identified argillic Bt horizons with moderate development.

Nonetheless, Foss concluded that human occupation of units 190-192 was confined to the upper part of the profile. Two or more episodes of deposition are present in each of these units. No pit features were observed in these limited tests.

Turning southward, the first test up the slope, 193, yielded completely different results; the locus clearly was complexly stratified and contained cultural material separated by periods of surface stability in which soil formation processes proceeded. It is situated on the south edge of the proposed 1992 version of the southern alternative right-of-way.

The A horizon, which was 25 centimeters thick, contained a piece of slate, a heat-fractured pebble fragment, and a jasper cortex flake. The next arbitrary layer, between 25 and 40 centimeters, contained a jasper cortex flake, a chert core fragment, and a fire-cracked rock.

Between 40 and 60 centimeters, this unit yielded five pebbles and a broken jasper side scraper. Between 60 and 75 centimeters, level 4 yielded a quartz core, a quartzite cortex flake, and two heat-fractured pebbles.

By now, it had become apparent that this locus contains some areas that are stratified. Charcoal flecks began appearing in the soil, and other evidence of human activity continued. Level 5, between 75 and 85 centimeters, contained a pebble and a fire-cracked rock. A change from sandy to clayey soil was apparent in this level.

Level 6, between 85 and 95 centimeters, contained only one pebble, and much more clay. When Foss sank an auger test into the bottom of this excavation, he found what he interpreted as a third A horizon beginning at 110 centimeters. His auger tests, to a depth of 240 centimeters below the current surface, yielded evidence of soil development below the putative third A horizon.

At his suggestion, the archaeological test was extended downward. The A horizon was encountered as predicted. Then, at 120 centimeters, the soil color changed dramatically. A distinct line divided the unit diagonally. Southwest of the line the soil was light yellow; northeast, it was a dark brown color. Such a color change, indicative of a feature, is difficult to interpret in a small test at such a depth. The unit was backfilled, pending more accurate interpretation through a larger-size test.

Just twenty meters away, unit 194 was completely different. It lay on a clay hillock just south of the proposed right-of-way line, but the location was chosen as a representative of more upland environments that were covered in heavy brush. Thin forest mold surface layer contained three heat-reddened pebbles and many pieces of charcoal, possibly indicating the presence of a charcoal-making hearth in the vicinity. Such hearths are seldom seen in Delaware, and could be significant in their own right if found. Foss sank an auger test into this unit to a depth of 172 centimeters, and interpreted it as a small ponded area, with recent sediments in the top 145 centimeters.

A sixth test, 195, was located near the edge of the bank, east of 191. Here the sandy soil was deep and contained artifacts.

At about 70 centimeters, this test yielded a jasper small-stemmed point with a broken base. The level between 70 and 95 centimeters contained a large piece of a

grinding stone (FIGURE 17E). The hand-dug test stopped 115 centimeters below surface, where the soil was still sandy, unlike the clay-bearing lower level at Blueberry Hill. The presence of thick lamellae testified to the age of this layer.

Foss examined the profile and drove an auger test to 250 centimeters deep, where he encountered a very old soil lying below a deep and well-developed Pleistocene horizon.

CONCLUSION AND RECOMMENDATIONS

Within the proposed right-of-way location, the site is stratified near the edge of the bluff. Farther inland, the evidence for stratification is less convincing. Woodland-period pottery found in one test could indicate an activity area from this period, which may be located farther to the north.

This group of tests achieved the original Phase I objective of identifying the site as it relates to the proposed alignment. The test also satisfied the Phase II objective of demonstrating the prehistoric site's integrity (defined in terms of stratification), but not the Phase II objectives of defining the site's limits or significance.

Limits of the whole site were not defined, but they can easily be defined through a series of test squares. Beyond the two clearly stratified units, its ultimate limits remain undefined.

Considering the areas already tested along the bluff, it is most likely that the Ford Farm and Blueberry Hill are merely nodes in a continuous network of related sites stretching along the river's west bank below the mouth of Maidstone Branch.

These tests did demonstrate, however, that there are gaps between the nodes or sites. The boundary of the Ford Farm site component (locus D) that was identified during the first survey can now be defined on its upstream (north) end. It consists of a deposit centered at the knoll where the first test was placed.

Evidence for a concentration of historic-period charcoal at the south end of the test area raises speculation that an intact charcoal-making hearth or pit might be encountered elsewhere on the property. When a final alignment is eventually chosen, it should be surveyed for charcoal pits.

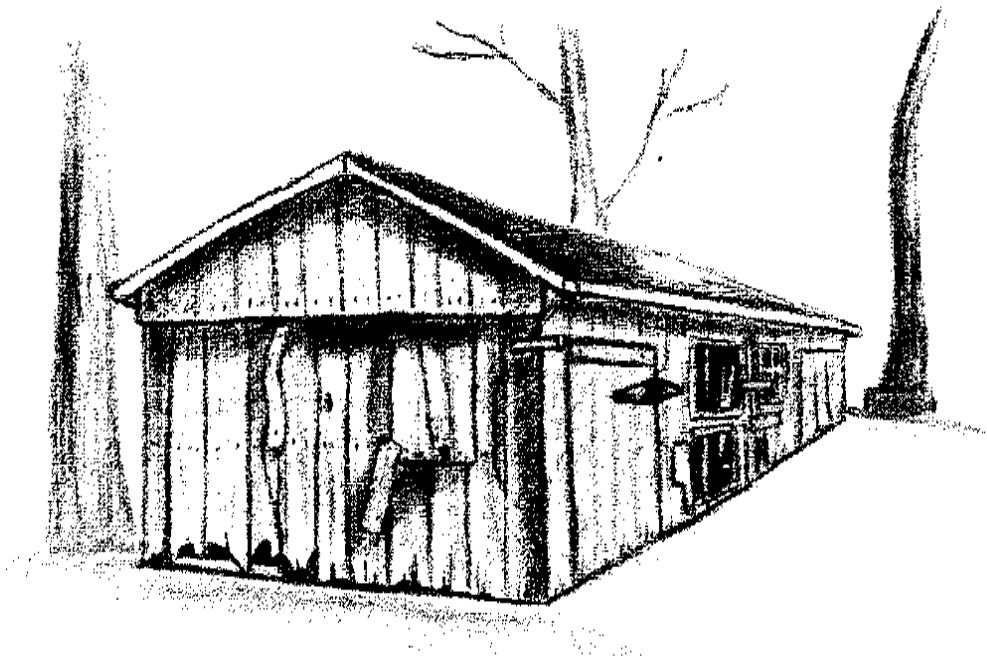


Figure 18
Sawmill accessory building
 Charcoal sketch by George A. Keeler

8. THE SCOTTEN-FORD AGRICULTURAL COMPLEX

THE FAMILY OF THE CURRENT OWNERS have built all the buildings now standing on the Scotten-Ford (K-6694) toft during the past century (FIGURE 19). These first resident owners had farms elsewhere, but preferred to reside here because it was close to the more convenient environment of nearby Dover. Their status and wealth were considerably above the previous occupants'.

The earliest representation of a toft on the property is found in the Susannah Stoops estate division of 1804, which was echoed in the 1840 plot (FIGURE 9). This toft stood in the field between the present toft and the railroad, an area marked by few artifacts.

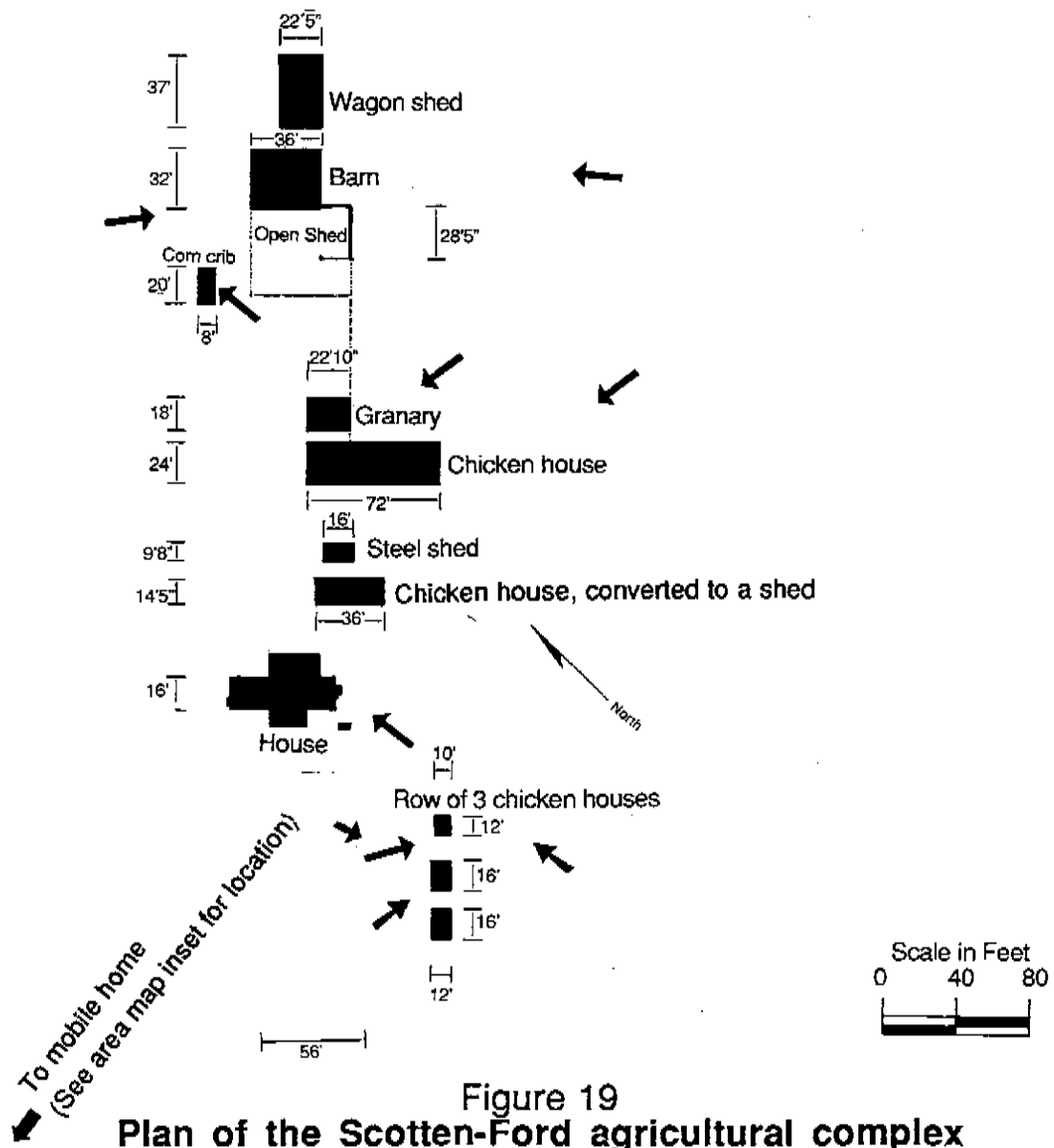
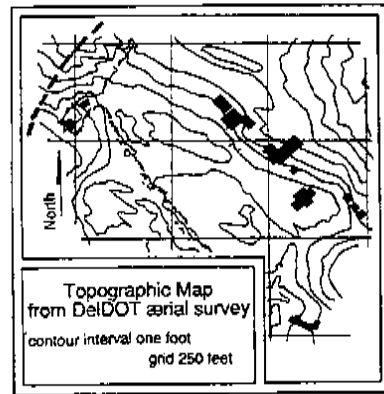
In 1867, Beers' *Atlas* showed a house at the same location and another house, apparently the Nathan Williams toft, as well. Both houses communicated to the outside by a lane that ran toward the present College Road.

Two tofts are clearly indicated on the 1882 plot, made a few years before Emory

Scotten bought the farm in 1888. He relocated the farm's toft and built the present house soon after he bought the farm.

Ground cover has not changed since 1882, except for clearing of the field north of the driveway between the toft and McKee Road. This field is artificially drained. The driveway appears to be largely unchanged since before McKee Road was built; it crosses a boggy area on a natural causeway and runs along the boundary of the former woods.

Since much of the farm consists of poorly-drained hardwood forest, timber harvesting has been an important economic activity in this vicinity since first European settlement. During the eighteenth century, the Loockerman family kept a water-powered sawmill near the present College Road bridge on the St. Jones River. Later there was a sawmill on Maidstone Branch at duPont's mill seat.



Finally, in the present century, internal combustion engines took over sawing duties. Farmers without water power sources could operate their own mills for their own use and for local markets.

MEDFORD FORD'S SAWMILL

In the woods near the barn stand two small sheds. One of these sheds is a former sawmill support building. The other is an

equipment shed less closely related to sawing, which once served as a repair shop for farm machinery.

Remains of old machines are scattered through the nearby woods. The mill itself has been dismantled, and parts are now thought to be located in another mill near Cheswold (Heite and Blume 1992:10). The wooden structure of the mill foundations still may be seen in the ground, however (below).

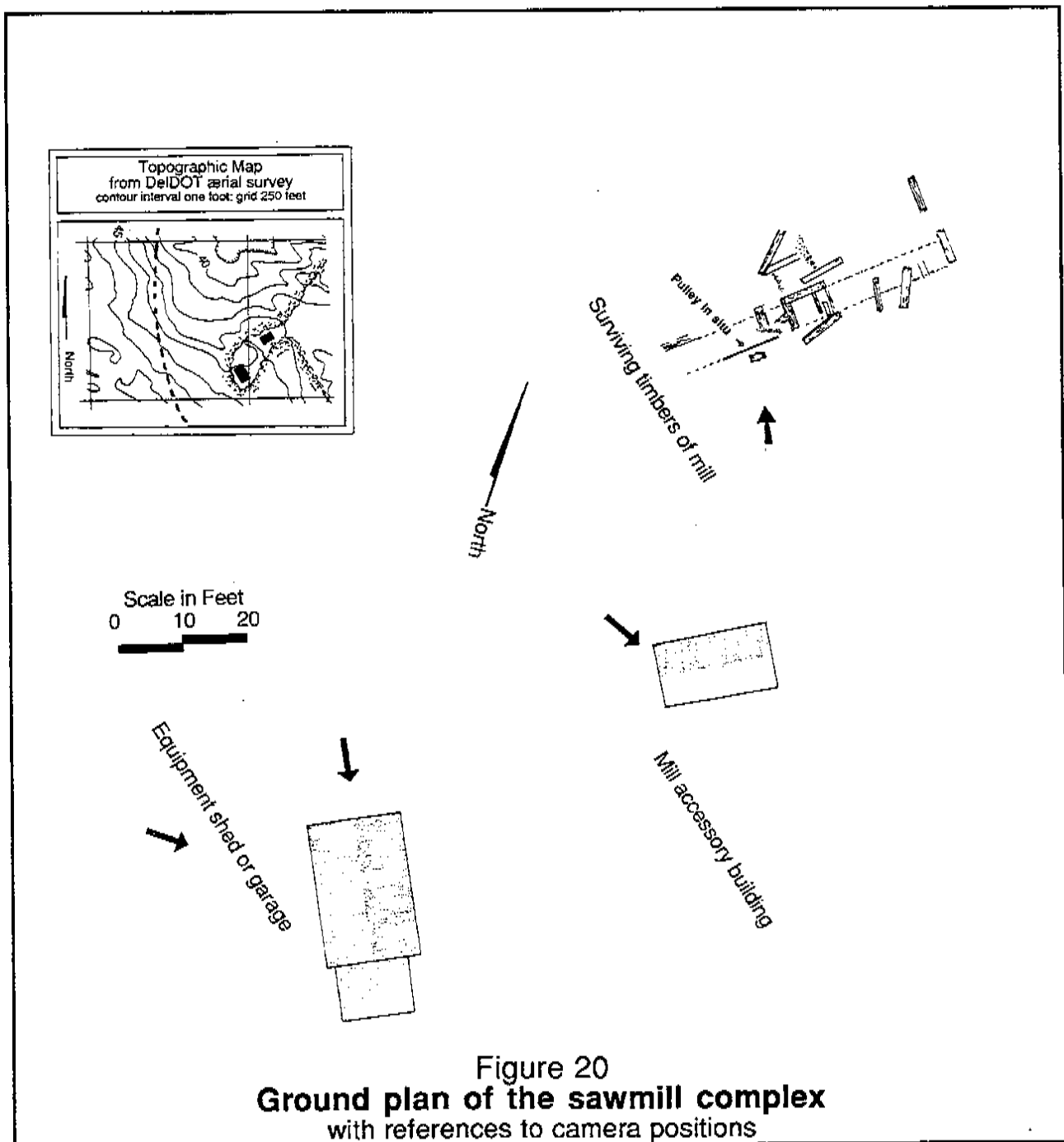




Plate 4
Pulley found *in situ* in sawmill
 See figure 20 for location

Motive power for these mills frequently was provided by the farmer's steam or gasoline tractor, although stationary engines are used in larger operations today. A large pulley on the tractor would drive a long, loose, leather belt, which in turn drove the pulley that powered the mill.



Plate 5
Rear of shed or garage at sawmill
 See figure 20 for location



Plate 6
Front elevation of shed or garage
 See figure 20 for location



Plate 7
Sawmill accessory building
 See figure 20 for location

Such portable sawmills were a significant part of the Delaware rural economy, allowing farmers to extract a cash crop out of high wetland, called "white oak soil" in the local vernacular. Even though western lumber took away considerable market share, hardwood products continue to be sawn in Kent County, mostly for pallets and other low-value end uses.

The mill group delineates the northern edge of the farmstead complex. At the other end, five structures exemplify another major theme in Delaware agricultural history.

CHICKEN HOUSES

Three small chicken houses southeast of the house, built by Medford and Florence Ford, represent the earliest period of what became Delaware's dominant rural industry. The first of these, 10 by 12 feet, is the northern of the three. Its siding is beaded tongue-in-groove. The other two, on the south, are 12 by 16 feet and covered with board-and-batten siding.

A fourth chicken house, north of the dwelling, is now used as a shed. It is 36 feet long by 14 1/2 feet wide. The final chicken house is 72 by 24 feet, farther from the dwelling. It represents the last period of farmer-built houses, before the advent of the much larger modern factory houses.

Behind the chicken houses are a granary and a corn crib, essential adjuncts of any livestock or poultry operation. There is no evidence of the automatic feeding equipment and production-line system typical of contract poultry farms since World War II.



Plate 8
North chicken house, from rear
 See figure 19 for location



Plate 9
North chicken house, from front
 See figure 19 for location



Plate 10
Middle chicken house, from northwest
 See figure 19 for location



Plate 11
Middle chicken house, from southwest
 See figure 19 for location

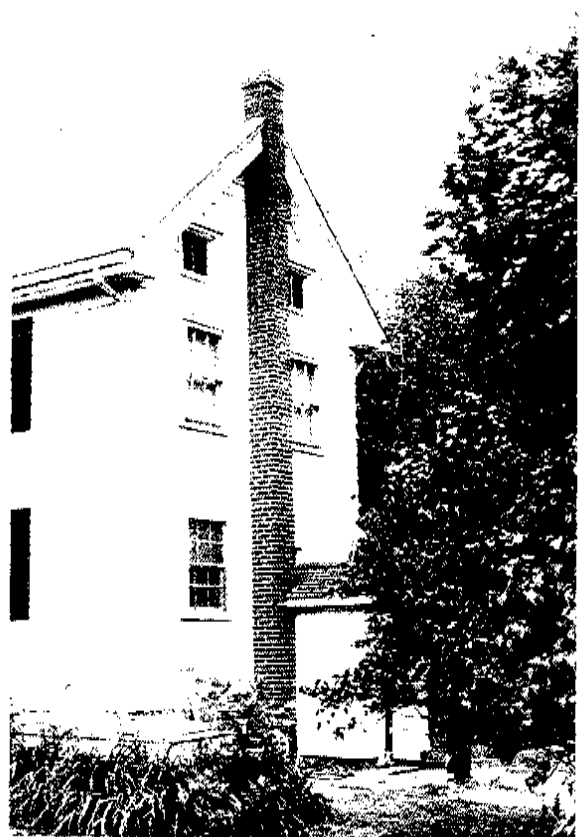


Plate 12
Scotten-Ford farm house
 See figure 19 for location



Plate 13
Largest chicken house
 See figure 19 for location

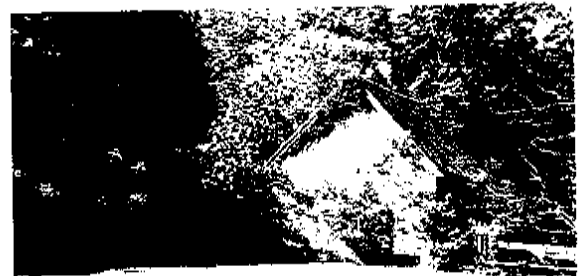


Plate 14
Granary
 See figure 19 for location



Plate 15
Corn crib

See figure 19 for location

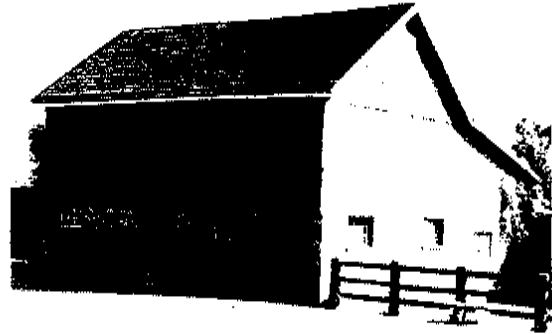


Plate 16
Barn

See figure 19 for location



Plate 17
Barn and wagon shed, from the southeast
See figure 19 for location

RESOURCES IN THE SCOTTEN-FORD AGRICULTURAL COMPLEX

DESCRIPTION	AREA OF SIGNIFICANCE	INTEGRITY	CONTRIBUTING RESOURCE?	DATE OR PERIOD
<i>Sawmill area:</i>				
Sawmill ruins	industrial archaeology	excellent	yes	early 20th century
Sawmill accessory building	industrial archaeology	excellent	yes	early 20th century
Equipment shed or garage	agriculture	good	yes	mid 20th century
<i>Agricultural Area (north to south):</i>				
Wagon shed	agriculture	good	yes	mid 20th century
Barn	agriculture	fair	yes	circa 1890
Corn crib	agriculture	good	yes	early 20th century
Granary	agriculture	excellent	yes	circa 1940
Chicken house 72 feet long	agriculture	excellent	yes	circa 1940
Steel storage shed	agriculture	excellent	no	recent
Chicken house 36 feet long	agriculture	excellent	yes	circa 1940
Chicken house 10' by 12'	agriculture	excellent	yes	circa 1930
Chicken house 16' by 12'	agriculture	excellent	yes	circa 1930
Chicken house 16' by 12'	agriculture	excellent	yes	circa 1930
<i>Dwellings:</i>				
Mansion house	domestic	fair	yes	circa 1890
Mobile home with outbuilding	domestic	excellent	no	circa 1960
Baynard residence (Not located in the toft)	domestic	excellent	no	1955
<i>Sites:</i>				
Ford Farm site locus E	archaeological	good	no	prehistoric
Nathan Williams site	archaeological	good	yes	early 19th cent
Delaware Railroad (Conrail)	transportation corridor	good	yes	1856

OTHER ELEMENTS OF THE TOFT

The small frame barn stands on a cement-block ground-floor story that includes a horse stall. The barn is older than its lower

story, which was replaced by Medford Ford. It is attached to an open shed within a fenced paddock. Beyond the barn is a frame wagon or equipment shed.

The farmhouse is a two-story frame building covered with replacement siding. It was built in two sections, with a porch addition on the south (front) and a kitchen wing on the north.

This typical Delaware vernacular house was built by Emory Scotten soon after he bought the farm. Over the years, it has been adapted to successive conditions and styles. There is no evidence that any above-ground elements of the previous farmstead were preserved.

INTERPRETATION

The toft, the croft and the sawmill site retain excellent integrity and well-defined historic boundaries. Only one non-contributing element, a steel shed, has been injected into the complex itself.

Outside the toft, the present owners of the property have erected their own residences, a mobile home and a brick house, within the past forty years. While these intrusions stand on the Scotten-Ford tract, they do not occupy locations where they intrude visually on an appreciation of the complex from an architectural or purely aesthetic point of view.

The sawmill-related industrial area was investigated archæologically, by uncovering and measuring visible remains. During the clearance, many pieces of machinery and tools were observed scattered around the property, as if they were discarded the last day the mill was used. Abandoned industrial sites are frequently picked-over by scrap dealers or cleared for re-use. In such cases, delicate features of the site's internal organization are lost. In this case, the only disturbance appears to have been removal of the main elements of the sawmill machinery.

Farm buildings have been spared both modernization and decay after the end of the

family's active participation in farming. Even though the ground is rented, the owners have carefully preserved the unused buildings. The result of this curation chronicles Kent County agricultural technology between 1888 and 1970.

ELIGIBILITY

In terms of both industrial archæology and the history of agricultural technology, the property clearly is eligible for the Register.

As a district, the farm meets several of the Delaware historical archæological criteria for evaluation listed on page 30. Both the mill and the agricultural buildings are representative of a type. The mill possesses good archæological integrity, as do the above-ground remains of the farming operation.

A mainline railroad, now Conrail, has been a significant part of the farm's history since it was built in 1856. The railroad does not cross the toft area, but its location significantly affected the way the farm is cultivated.

The railroad is a contributing element, or at least it is not a non-contributing element, of the site. It is the oldest visible feature of the property, and it certainly played a central role in the history of Delaware agriculture, even though its role in this particular farm's history is peripheral.

The five-acre Baynard property, which has been separated from the main body of the farm, contains some of the plowed field of the former Nathan Williams croft, and continues to be a functional part of the farm. The house is a non-contributing element, but most of the lot area remains in agricultural use and therefore is a contributing element.

9. NATHAN WILLIAMS TOFT SITE

THE NATHAN WILLIAMS SITE (K-6454, 7K-C-389) was identified during Phase I studies for the current project (Heite and Blume 1992:54-55). In that survey, the entire field was walked from the driveway to the property line. The only artifacts were found on a knoll by the road that is the highest point in the field. Surface materials (90-23-03) were deposited at the Island Field Museum.

The property was identified in an 1838 document as roughly eleven acres with a house, "late" in the tenure of Nathan Williams, free Negro. A house is shown in this approximate location on the Beers *Atlas* map of 1867, and again in surveys dated 1881 and 1882. In a deed of 1884, an adjacent property was identified as lying near a property still identified as the Nathan Williams lot.

Given the insubstantial construction of many tenant houses, it is possible that Nathan Williams' house was actually replaced by the one represented on later maps. Since today's McKee Road is considerably wider than the 1881 road, there was also a high probability that the house site had been destroyed by road widening over the past century.

The Phase II objective was to define the limits of the site, and to determine if any buried features might still exist.

RESEARCH DESIGN CONSIDERATIONS

Low-status sites seldom contain buried features. High-status sites, on the other hand, are usually defined by their subsurface features and large collections of artifacts. Hand-digging small Phase II tests to discover buried features in low-status sites would be futile, because the chances of hitting a feature in a small test are low, even in the midst of the toft.

Existence of subsurface features is the generally accepted proxy measure for archaeological integrity, a prerequisite for determination of eligibility. However, surface-only sites might possess integrity.

Controlled surface collection using large squares, such as ten meters, is less than desirable in a low-status site, because these sites are small and yield scant artifacts. We used a modified controlled technique, in which a flag was dropped and plotted wherever clusters of artifacts were observed. This subjective approach is more fine-grained than counting yield from large surface squares when trying to define the shape of a small known site. The results yielded far better definition than could have been provided by recording surface finds in large squares. The next level of definition would have been piece-plotting and cataloguing of each artifact, which is inappropriate at the Phase II level.

Soil chemistry, normally a fall-back technique at the Phase II level, was used after it became apparent that traditional field observation techniques would not suffice to define site boundaries. Soil chemistry is more satisfactory when the site is being fully surveyed, along both axes. In this case, project conditions dictated a traverse, rather than a grid.

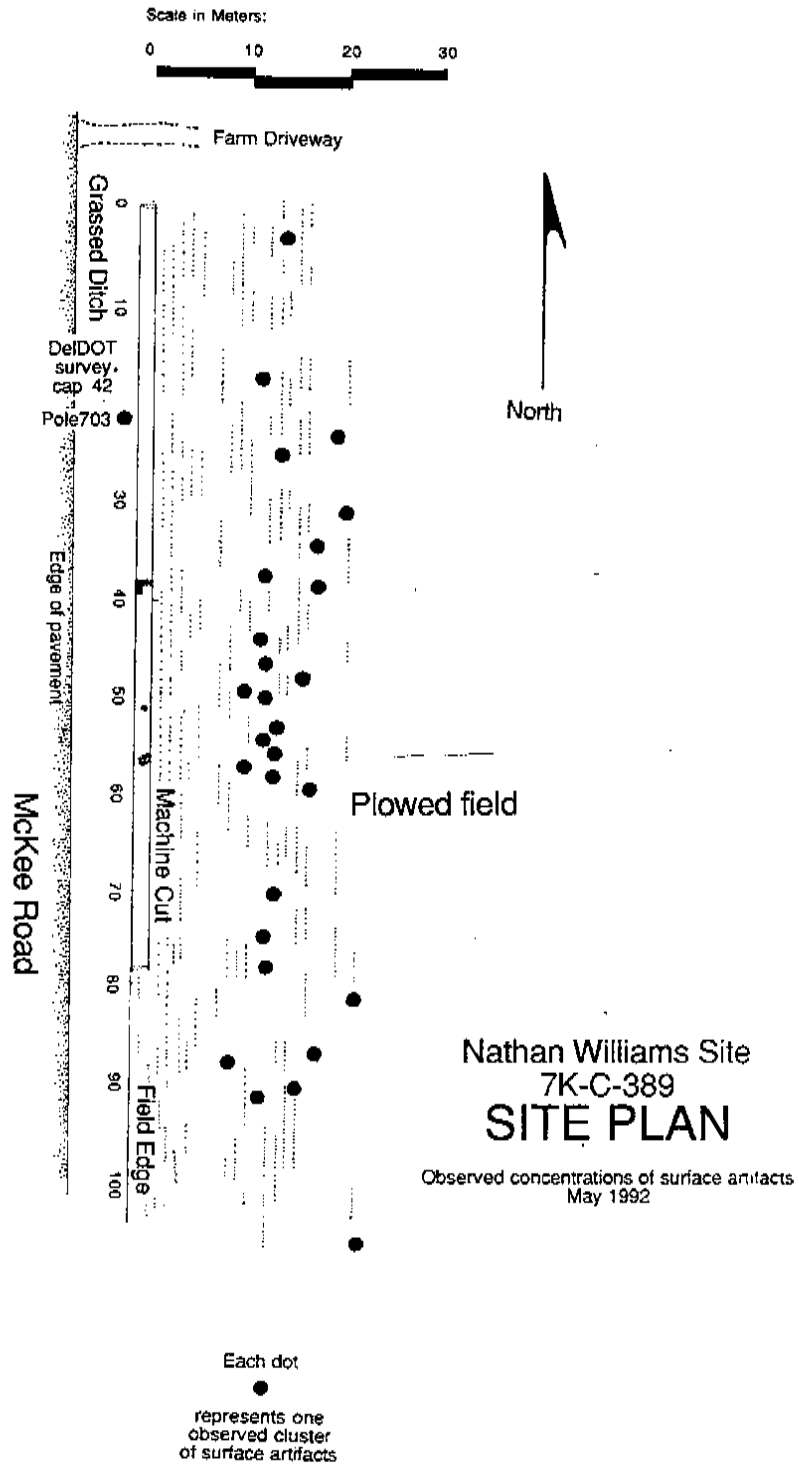
It would have been better to isolate features *at this level of survey* by sampling the topsoil across the site, then stripping a wide area with a Gradall. Had we found substantial buried features, we would have satisfied the Phase II requirements, as specified in the state management plan. However, the site was planted in corn just as the project began, so that minimizing crop disturbance became a major consideration.

FIELDWORK NARRATIVE

To avoid massive crop disturbance, it was decided to make a cut parallel to the road, on the edge of the field.

On May 6, 1992, a Gradall cut was opened along the edge of the known site. Since the site was already planted in corn, the trench was confined to the margin of the field. This trench, 77.5 meters long, was opened with a smooth blade roughly five feet wide (1.65 meters). Several features were observed and recorded.

Figure 21
Nathan Williams Site 7K-C-389



Approximately 250 feet from road to site limit at field edge ➡➡

Sketch map not to scale

One feature, 3A, consisted of a tight pattern of crescent-shaped divots cut out of the clay subsoil. Observers were unanimous in interpreting this feature as marks made by the tip of a round shovel, striking the hard clay subsoil in a vain attempt to dig a hole, probably during the summer, when central Delaware clay soils are impenetrable.

Other features, 3B through 3F, were clustered at the highest point on the site, between 38 and 60 meters from the zero point on the trench. The first, 3B, was a linear soil mark, filled with powdery gray soil and extending a few centimeters below the plowzone.

Next to 3B was a complex feature, consisting of a posthole, 3C, with two intrusions, one heavily organic and the other sterile. These were interpreted as a planting

and the backfilled hole from digging out the plant.

Square postmolds were observed in this same area, suggesting that this place was the focus of intense activity at some time in the past.

At the far end of the ridge was a large, amorphous, feature, 3F, containing badly decomposed bone fragments and dark organic soil. These features, in the aggregate, are typical of features found on a toft.

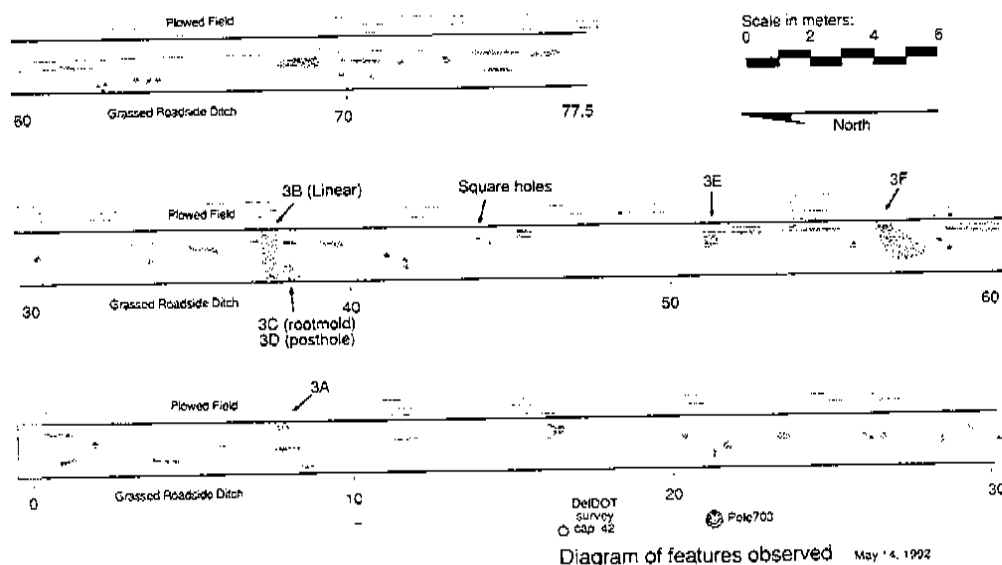
FLAGGED SURFACE COLLECTION

Since surface collection conditions were nearly perfect, the entire field was walked. Each fieldwalker carried a handful of crop flags. Whenever an apparent concentration of artifacts was observed, the observer placed a flag (FIGURE 21).

Figure 22

Nathan Williams Site, 7K-C-389

Diagram of observed features uncovered in the trench. Scale is in meters from starting point by driveway.



While these observations were subjective in individual cases, the aggregate observations of three fieldwalkers produced what appears to be a valid pattern of clustering. The heaviest concentration of flags was opposite the features, on the summit of the site; few artifacts were found east of the concentration.

The north end of the Nathan Williams holding, in the field beyond the driveway (ER 189), was walked during the excellent viewing conditions of planting season. No other concentrations that might indicate a house site were identified.

THE SOIL SAMPLES

Soil samples were taken from both the topsoil and the subsoil at one-meter intervals along the Gradall trench. We took 154 samples, along the 77.5-meter cut, which should give excellent definition of any chemical markers. Archaeological soil samples in other sites have been taken from a much coarser grid. The samples were then analysed at the University of Delaware soil laboratory.

In other sites, features within tofts have been mapped by their chemical characteristics when samples could be collected on a two-dimensional grid. At the Williams site, only one axis was available for plotting, so the chemical results are represented as a single profile line.

All the samples showed some variation in the vicinity of 38-60 meters, the supposed location of the toft. Some elements were elevated near the driveway, near the beginning point of the traverse.

As expected, the chemistry of the topsoil differed considerably from that of the subsoil, possibly as a result of more recent fertilization, as has been demonstrated elsewhere (Shaffer et al. 1988:133).

Phosphate levels, which indicate concentrations of organic waste (FIGURE 24), were relatively uniform in both subsoil and topsoil samples. Topsoil phosphates were elevated in the driveway area, while subsoil phosphates were depressed in the toft area.

A low, or acid, pH factor is supposed to indicate a high level of organic waste (Custer et al. 1986:91). In this case, pH

distributions in topsoil and subsoil were similar, with elevated levels at both the toft and driveway locations (FIGURE 23).

High pH levels at the driveway might indicate accidental discharge of lime at the edge of the field. While it might be tempting to interpret this driveway area as an activity site from the days of Nathan Williams, it is equally likely to be a staging area for recent agricultural spreading, since it lies at the entrance to the farm conveniently in the corner of the field.

At the Thomas Williams site near Glasgow, variations in subsoil pH levels were interpreted as evidence for house locations, while relatively uniform pH distributions in the plowsoil were attributed to modern agricultural practices (Catts and Custer 1990:190). Areas of high pH levels at Smyrna Landing were interpreted as coming from mortar rather than from agricultural liming (De Cunzio, Hoseth, Hodny, Jamison, Catts and Bachman 1992).

Calcium levels, which should reflect the presence of lime, displayed slightly different profiles (FIGURE 23). Calcium in the topsoil exhibited a slight elevation at the driveway area, but the curve was nearly flat over the putative toft. Subsoil calcium, however, showed a bulge at the toft area as well as the driveway area. This difference may be taken to indicate an activity other than recent agricultural field liming.

Overlapping areas with elevated calcium and phosphorous levels at New Windsor, New York, were used to isolate non-feature domestic activity areas (Sopko 1983:29) in a much larger open area with many foci. At the Clocker's Fancy site in Maryland, congruence of these two elements was found at the kitchen area, but calcium alone appeared to define a large yard (Stone, Miller, Morrison and Kutler 1987:29).

Magnesium values at the Wilson-Slack site in New Castle County were similar, and were attributed to building materials (Custer et al. 1986:92).

In the present case, phosphorous was scarce in less-acid areas where calcium and magnesium were more concentrated. Since bricks were scarce, it is certain that a large mass of mortared brick rubble did not

generate this chemical footprint; lime-based plaster or whitewash could be the source, however. Calcium concentrations at the Thomas Williams site near Glasgow were taken as chimney location indicators (Catts and Custer 1990:186).

Potassium, sometimes attributed to deposits of wood ash, showed a depressed level in both the topsoil and the subsoil in the putative toft area, but was elevated in the topsoil near the driveway. Correlation between pH and potassium, observed at the Wilson-Slack site, was not observed (Custer et al. 1986:93). Manganese levels were elevated in the presumed toft area, strongly in the subsoil and mildly in the plowsoil (FIGURE 25).

The general picture that emerges from the chemical analysis is a toft area in the vicinity of the observed features between 38 and 60 meters from the driveway, with another feature near the driveway entrance that is not fully understood. Because the driveway is historically part of the Williams lot, it should be included in any investigation of the toft.

A driveway near this location appears as early as the Beers *Atlas* survey of 1867, connecting the earlier toft to the road now known as College Road. Without considerable archaeological examination outside the project area, it would be impossible to determine if the driveway has been moved substantially since McKee Road was built.

THE ARTIFACTS

Surface-collected artifacts from the site may help provide date and status information. Artifacts that might date from the Nathan Williams period included a piece of white saltglaze stoneware and the base of a free-blown beverage bottle, both of which are clearly eighteenth-century. A pharmaceutical bottle base appears to be the earliest object in the collection, resembling specimens as early as the late seventeenth century.

Early artifacts may represent an early occupation, on which a later occupation was superimposed, or a long period of reuse of old utensils by poor people. Most of the material from the site is later and more diverse, reflecting inhabitants' access to

markets after the middle of the nineteenth century, and their use of such mass-market goods as printed white earthenware.

Existence of buried features, the test of integrity, was confirmed, and boundaries were established. Since this property type is quite rare, its significance is undeniable.



Plate 18
Trench and soil sample bags,
laid out for collection, looking south



Plate 19
Shovel shaving the trench

Figure 23

Nathan Williams Site, 7K-C-389, pH and calcium

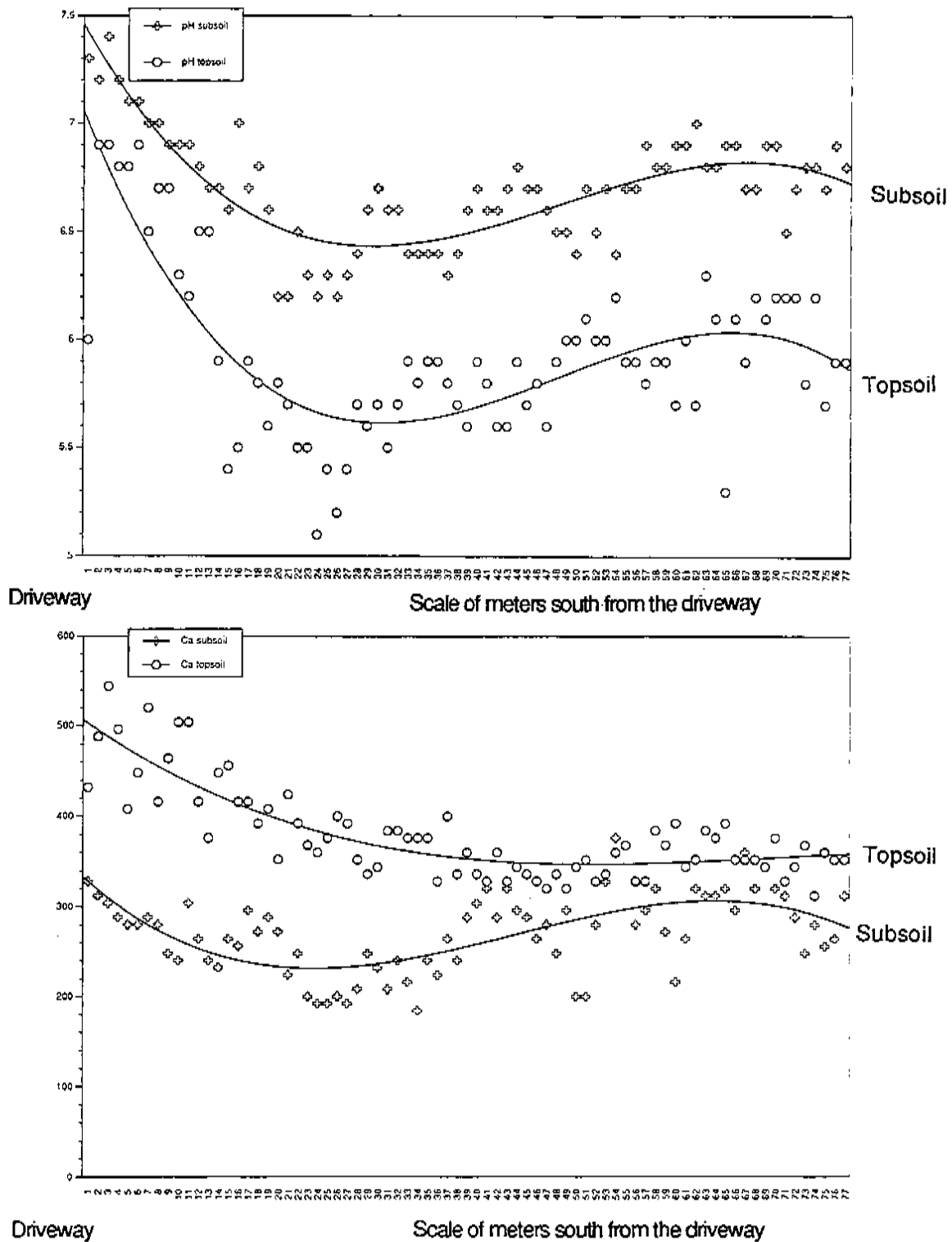


Figure 24
Nathan Williams Site, phosphorous and potassium

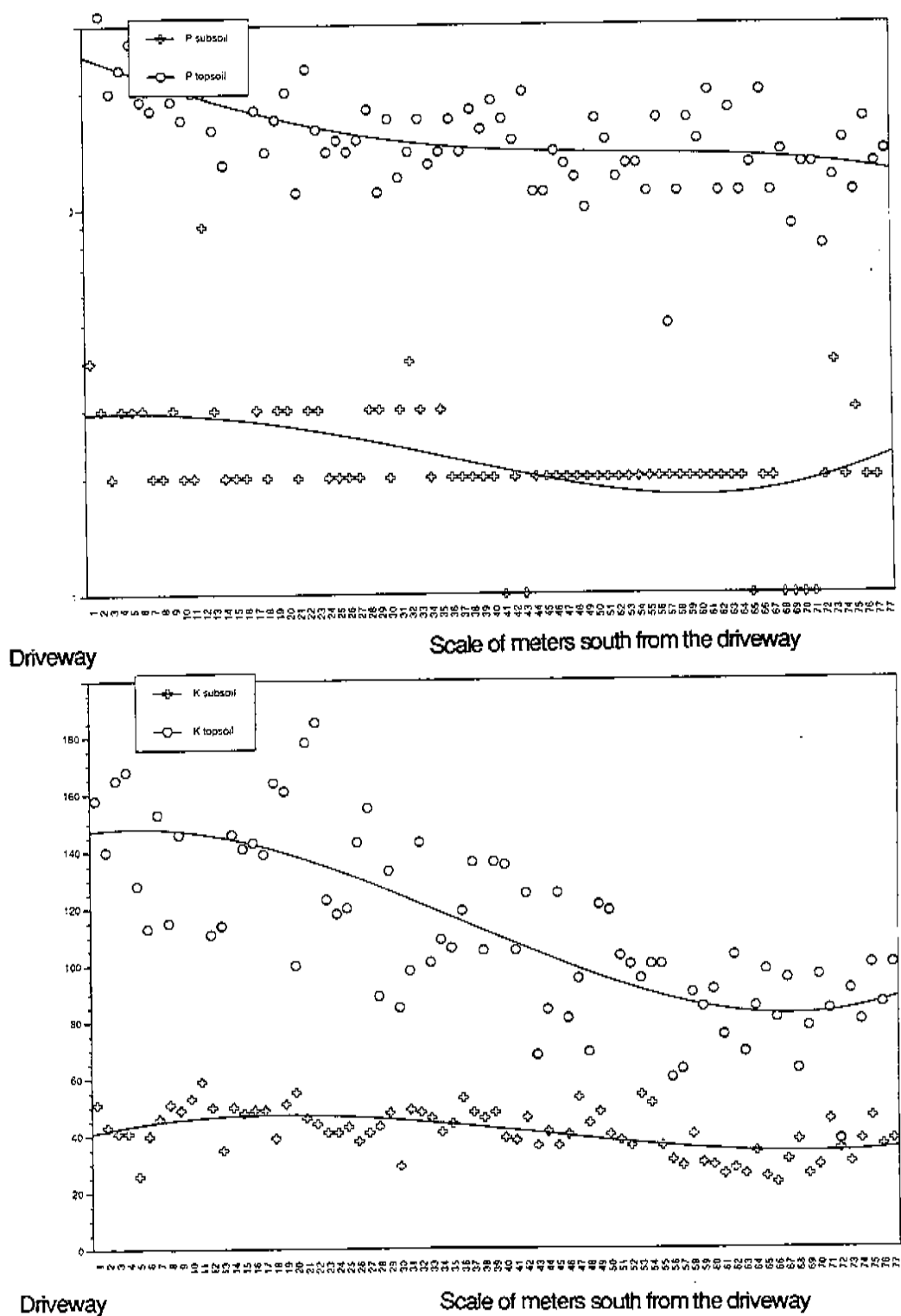
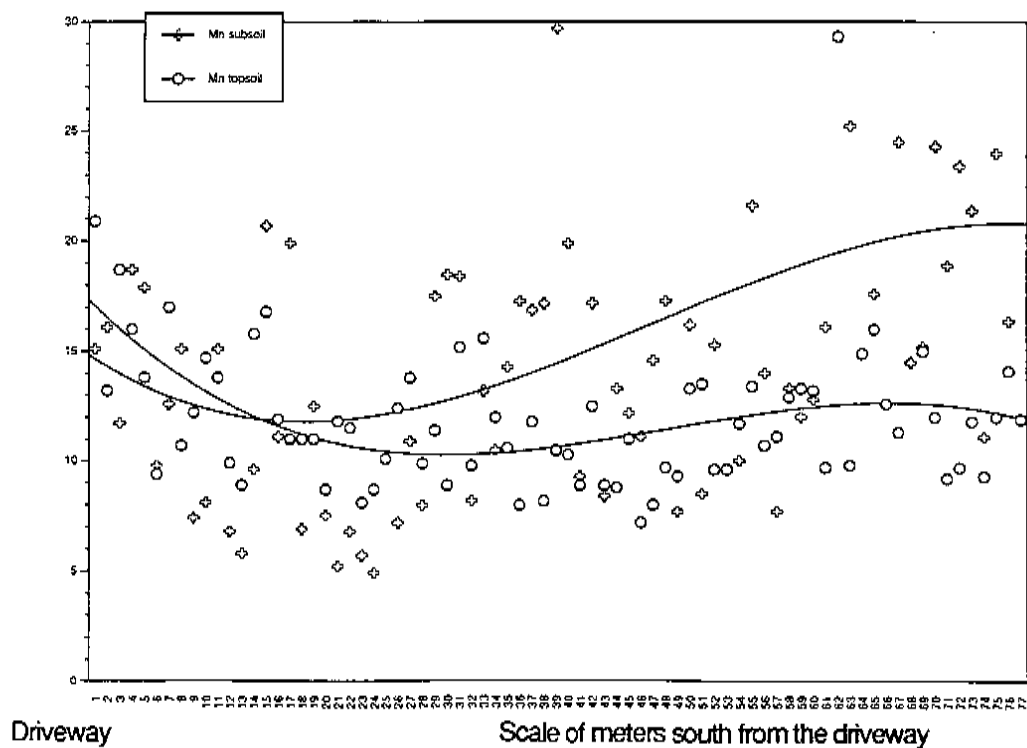
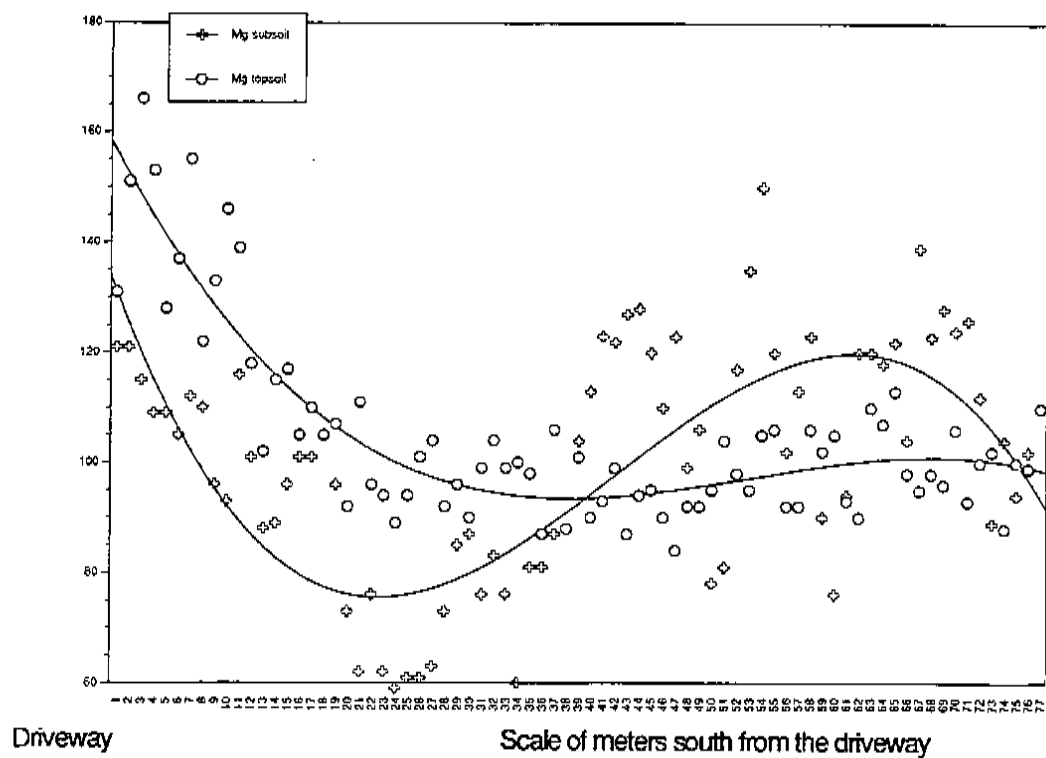


Figure 25

Nathan Williams Site manganese and magnesium



Quantitative and qualitative contrasts between earlier and later objects may reflect changes in circumstance of the occupants, which will be clearly delineated if buried deposits from different periods are uncovered. For purposes of completing the determination of eligibility, the tests were sufficient to indicate site boundaries and to demonstrate that the site retains integrity.

Within the eleven acres Nathan Williams occupied, there are two documented occupations. The first was Williams. The second was the DuHamel tenants of circa 1877.

Both time periods are represented in the surface collection, which identified a site centered in the naturally most desirable part of the eleven acres, a slight rise in the field.

The spatial relationship between the two occupations has been established, but temporal continuity is not certain. Only excavation can determine if the site was continuously occupied, or if a later tenant house was built on or near the Williams site.

Some, or all, of the house site[s] could have been destroyed by earlier road building. It appears from the Phase II evidence that a substantial portion of the toft survives in the form of subsurface features in the existing field.

Chemical profiles demonstrate the existence of a domestic area. Chemical results are summarized in appendix 1 and figures 23-25.

Nathan Williams' former property was bisected by McKee Road, so that four houses of the Mosley community were built on it after the swap between Mosley and Denney (FIGURE 10, PAGE 44). It is therefore impossible to know, without excavation, if the Williams toft might extend across the road.

Any disturbance on the west shoulder of McKee Road should be preceded by a test for potential remains of the Williams toft or the original driveway.

EVALUATION OF ELIGIBILITY

As an example of a little-known site type, the Williams toft cannot be underestimated. Its potential value to the archaeology of agricultural technology has been compromised by its later inclusion in the Scotten-Ford agricultural activities, which could have obscured earlier evidence.

According to National Register standards, if a site should be found to possess both subsurface integrity and definable boundaries, it would be eligible for listing. The Nathan Williams property meets these requirements.

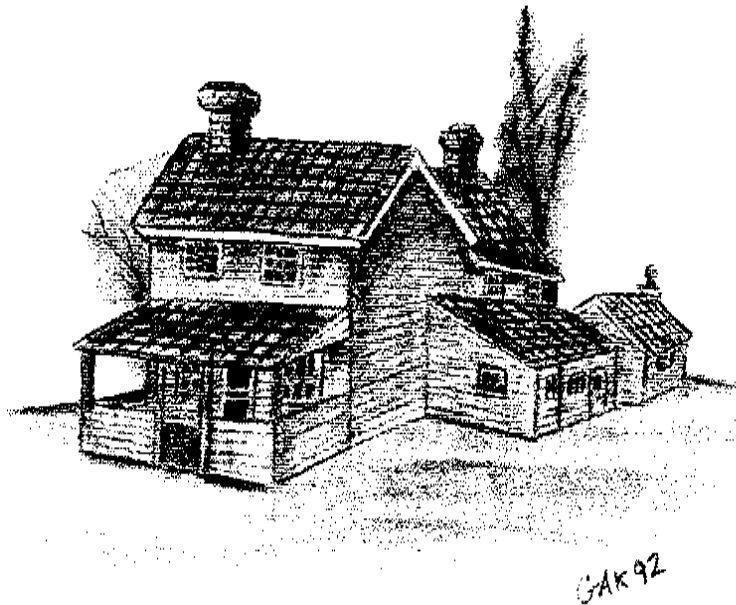
The western boundary of the surviving site is McKee Road. However, the portion of Nathan Williams' property that fell west of the road should be considered potentially a part of the archaeological site.

The eastern boundary of the site, for purposes of the National Register, is the field edge that lies about 250 feet from McKee Road. This field edge is the former Williams property line, as well as the edge of well-drained soil.

A five-acre parcel occupied by one of the owners has been cut largely from the Williams tract. A substantial portion of this tract is cultivated as part of the field that includes the archaeological site.

Until other, more substantial, archaeological tests are conducted, the Williams toft site can be defined as limited on the northeast by the edge of the woods that formed the original boundary of his tract.

Along the road, the north and south boundaries of the site can be defined by reference to the ridge on which it stands.



K-1060

Figure 26
Sketch of the Leon Corney House
 as it appeared when occupied

10. THE MOSLEY COMMUNITY

ALONG THE WEST SIDE OF MCKEE ROAD stand two two-story frame houses and a single-story house, built around the turn of the century in varieties of the Delaware vernacular style.

A fifth member of the group, the William Morris Carney house, has been moved to the Delaware Agricultural Museum. The museum's house, described in the following chapter, exhibits characteristics common to the group.

The one-story house, said to have been moved to its site more than fifty years ago, occupies a triangular lot that was among the early community elements. Two other two-story frame houses, the Robert Carney house and the Frazer Carney house, are lost.

The community came into being in 1884 when Jacob Mosley bought a 36-acre tract from Samuel Pleasanton Mifflin. This had been part of Mifflin's mother's share of her father, John Pleasanton's, estate. Subdivision of the Pleasanton farm was a classic example of the role of the probate

process in creating subdivisions through successive estate divisions. Recently the same process has led to further fragmentation (FIGURE 30, PAGE 81).

John Pleasanton bought 286 acres of marginal land in 1818 as an investment. When he died, twenty years later, it was split among his heirs (FIGURE 9, PAGE 43).

By the time the daughters had all died, the 286 acres was fragmented into small holdings, mostly too small to be useful. The best ground was Mary DuHamel's portion along the St. Jones River.

When the present McKee Road was opened in 1881, the Mifflin and DuHamel tracts obtained valuable road frontage. In 1882, Mary Du Hamel's son-in-law, William Denney, bought the farm from her estate. Jacob Mosley bought Samuel Pleasanton Mifflin's 36-acre tract of unimproved land in 1884. Denney and Mosley adjusted their boundary to conform to the road alignment later that year (FIGURE 10, PAGE 44).

Within the next few years, Mosley sold off parts of the tract to other members of the moor community. In short order a row of small two-story farmhouses stood along the road. Other Pleasanton heirs sold additional tracts, and so did the neighbor to the north.

The community remained stable for nearly three-quarters of a century. The houses were occupied by two or more generations, and the small farms provided subsistence or supplemental food and income to wage-earning residents.

With the passing of the second generation, the properties again fell into the hands of younger family members who were absentee owners. These heirs sold off their portions as building lots, creating the present infill of modern houses and mobile homes that now line the road. Eventually the older houses were abandoned as McKee Road became a suburban street consumed by the Dover sprawl.

Newer houses, owned by people who are not members of the moor group, were built farther back from the road. The rural character of the community faded as it merged into the suburban strip.

LEVI MOSLEY PROPERTY

Immediately north of the Pleasanton property was another former Loockerman estate fragment, 213 acres belonging to Lewis Geiser. When he bought his farm in 1880, Geiser also was the first resident owner on his piece of the Loockerman estate.

Between 1896 and 1903, Levi Mosley bought three parcels, totalling twelve acres, from Geiser, adjoining the land Jacob Mosley had bought from the Pleasanton heirs. The two-story house on that parcel (K-6689) is larger than most of the neighbors', and has been altered. An unusual facade, with a hip-roofed wing in the front, sets this apart from the local folk genre.



Plate 20
The Levi Mosley house, built circa 1896

Elizabeth, widow of Levi Mosley, sold the property in 1915 to Watson Cramer, who sold it in 1922 to William H. Morgan. The Morgans sold it in 1941 to Wilbert Sherman of Port Penn, who conveyed it in 1944 to Charles and Ethel Showell of Pennsylvania, who sold off pieces in 1959 and 1962. The surrounding houses and a mobile home now occupy the tract and the farmland remains fallow.

The part of Geiser's farm west of McKee Road is a subdivision called The Meadows. The eastern part is occupied by General Metalcraft, a circa 1939 bungalow, and a warehouse; the fields lie fallow.



Plate 21
House on the Johnson lot

MARTHA JOHNSON LOT

Next to Levi Mosley's tract is a triangular half acre Jacob Mosley sold to Martha Johnson, wife of Burton Johnson, in 1885. She was a widow in 1906 when she sold it to Walter H. Carney. He held it until 1937, when he sold it to Frank Hall Pritchett, who conveyed it to Paul Smith in 1955.

The property has a history of lifetime owner-occupancy unrivalled in the neighborhood. The present one-story frame house (K-1059) is a former school, moved to the site from across the road more than fifty years ago after the earlier house burned. The house has undergone considerable renovation. It stands on one of the oldest lots on the road, even though the house betrays little evidence of age.

LEON CORNEY HOUSE

The two-bay, two-story Leon Corney house (K-1060) is one of two surviving

similar houses built by the first generation settlers along the road. Leon Corney, or Carney (1898-1973) bought 13 acres from the First National Bank of Dover in 1939. The property had been conveyed in 1938 to the bank by Clody and Estella Pritchett.

The Pritchetts had obtained the tract from David and Lucinda Mosley in 1910. At that time it was 16 acres, the residue of the original Jacob Mosley farm. This may, therefore, be the Jacob Mosley house; David and Lucinda Mosley lived in an adjacent house, destroyed in 1993 (K-6690).



Plate 22
Leon Corney house, facade



Plate 23
Leon Corney house, rear



Plate 24
Leon Corney house, detail of
kitchen chimney end

While the chimneys of the main house are brick, consistent with the original period of construction, the kitchen features a cement-block chimney with a cast-concrete top.

MOSLEY-BRATCHER HOUSE

In 1888, Jacob Mosley conveyed three acres to Lucinda Mosley, wife of David. On this three-acre tract until 1993 was a house (K-6690) that probably was built soon thereafter. David and Lucinda added to their holdings. In 1900 they bought 19 acres of the Pleasanton estate from Florence Creadick, a widow whose husband had bought it for investment.

Figure 27

Ground plans of the two Mosley houses

The Mosley-Bratcher house, K-1060, above, and the Leon Corney house, K-6690, below, with photo locations of the plates indicated by arrows

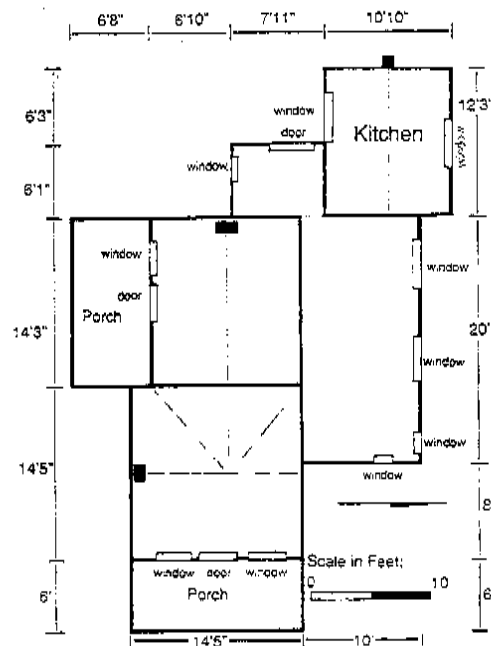
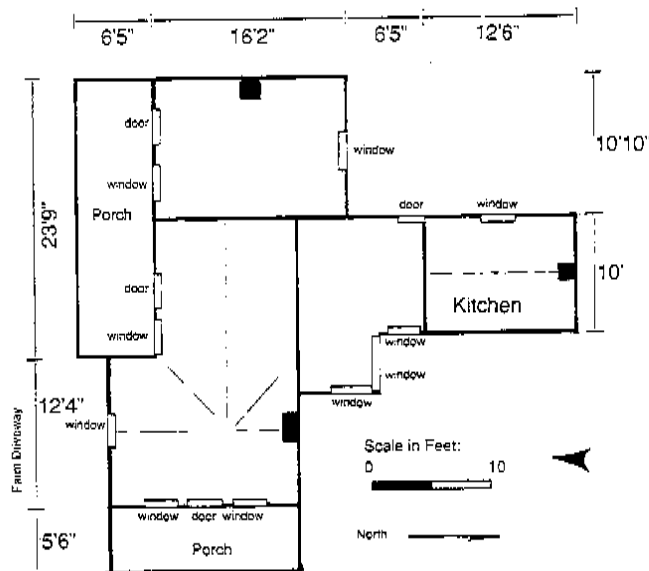




Plate 25

**Mosley-Bratcher house,
from the southeast**

David, Jacob's son, eventually controlled about 40 acres west of the road. Between 1911 and 1915, he also owned part of the Geiser farm east of the road.

In 1919 David and Lucinda conveyed the remainder of the home farm to Herbert Harmon of Philadelphia. The Harmons added to the holding by purchasing yet another Pleasanton estate tract, the 18-acre Susan Hamm portion to the west. The Harmons held the property forty years, until 1950, when they sold it to Albert and Emma Bratcher, who resided there for many years.



Plate 26

**Mosley-Bratcher house,
from the north**

These two Mosley houses represented an extremely conservative style of construction, with external kitchens that had become unfashionable among whites in Kent County by the late nineteenth century. Porches, now enclosed, connected the houses to the kitchens and provided outdoor covered work areas.

The next two houses in the group are missing. A row of modern houses now occupy the five-acre lot that Jacob Mosley sold to Robert Carney in 1884, part of the original subdivision. Within living memory this lot contained an old house (PLATE 1), and the yard trees still mark its site.

South of the Robert Carney lot was the lot Isaac Mosley conveyed to Sallie (Mrs. William) Carney in 1885, part of the ten acres he had bought from Jacob Mosley the year before. Her house (K-6691) is now at the Delaware Agricultural Museum and is subject of the next chapter.



Plate 27

Frazier Carney house facade

FRAZIER CARNEY TOFT

Sallie's son, Frazier Carney (1883-1946), built the house that stood until November 1992 on Isaac's five acres next to the south edge of the original tract (K-6692). When he died, the farm contained 22 acres.

This house was larger and more elegant than the others, but it had a separate kitchen, like the other houses in the group. It was the only one of the group that still had its farm buildings. The plan was L-shaped with a broad verandah on two sides.

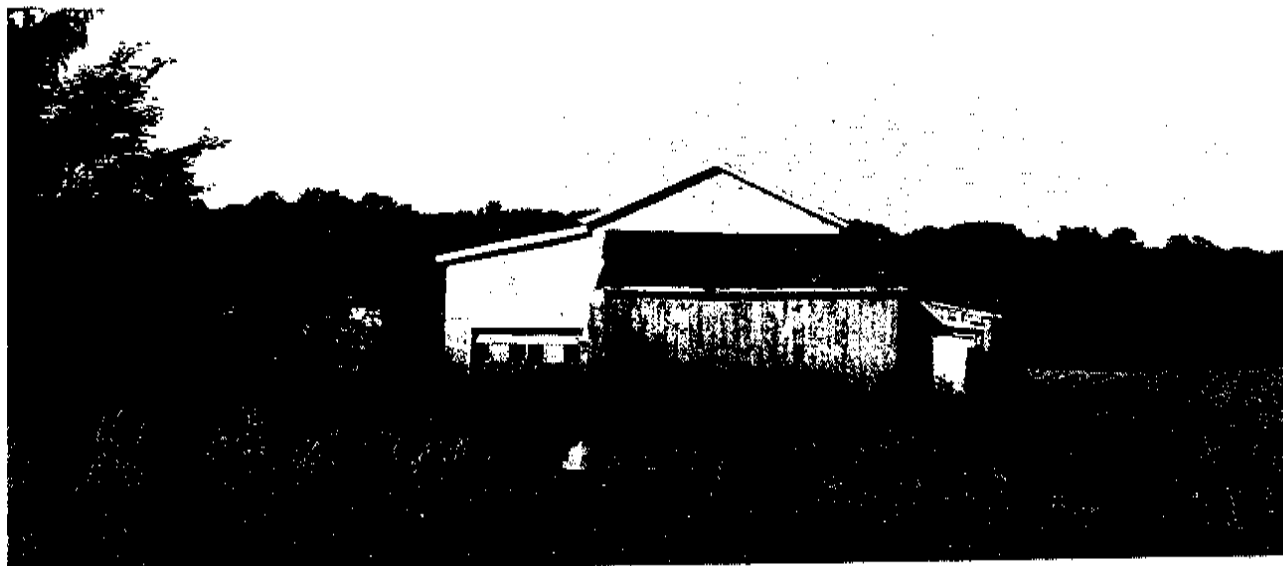


Plate 28
Frazier Carney barn, corn crib and privy

Figure 28

Ground plan of the Frazier Carney House

K-1692, with photo locations of the plates indicated by arrows

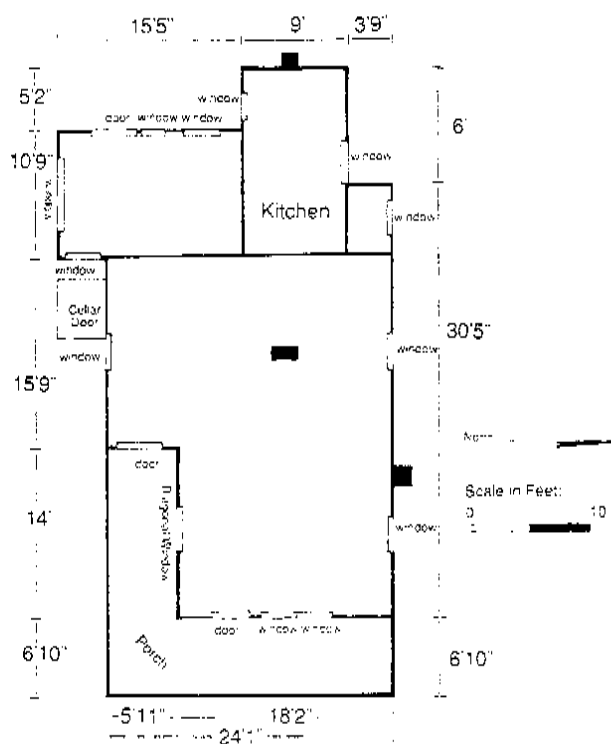




Plate 29

Frazier Carney house, rear

Only this property, of all the community, retained its agricultural outbuildings (PLATE 28) until it was burned. Even though all but two of the houses are derelict and the original families have moved away, the Jacob Mosley tract is not uninhabited.

Instead, the community's territory is occupied by a new generation of modern houses and two church buildings. While original families still own some parcels, most occupants are a new population. The process of succession and subdivision that began with the Loockerman heirs in the eighteenth century has continued through another phase.

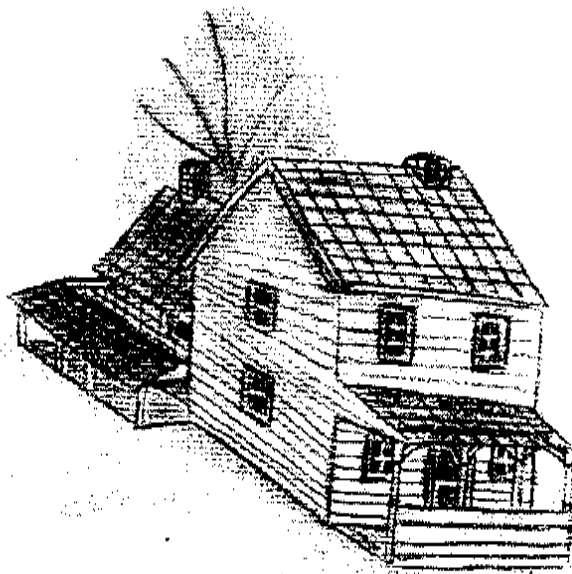
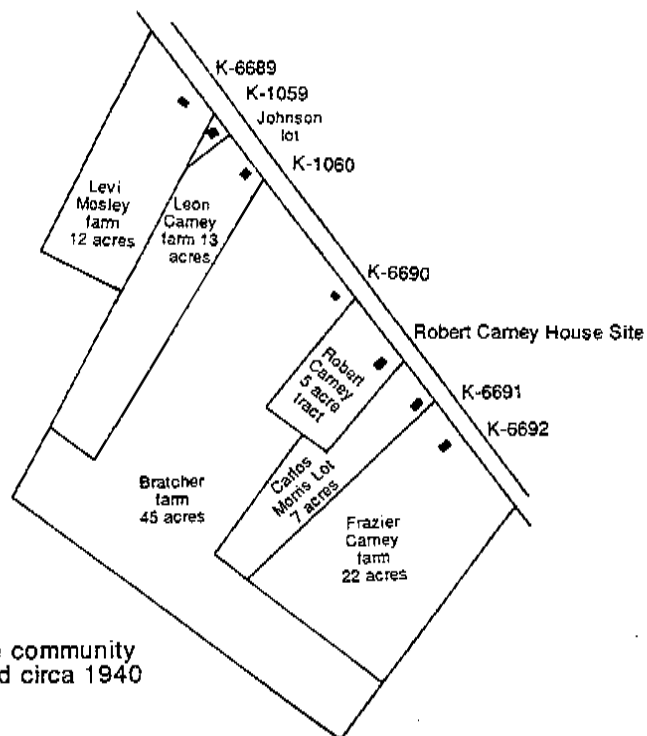


Figure 29

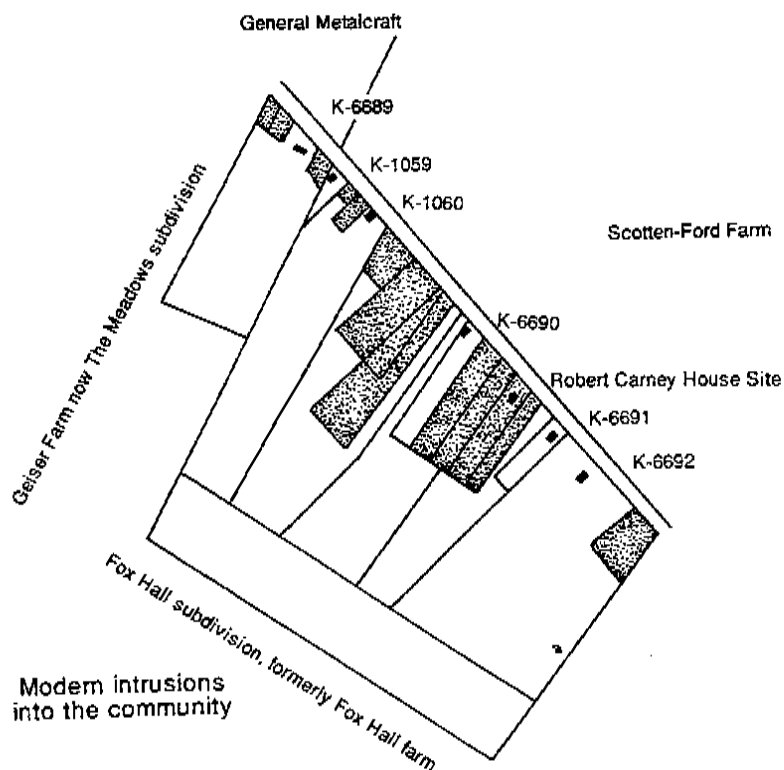
Sketch of a "typical" house of the group
based on the Mosley-Bratcher house

K-6690

K-6689: Levi Mosley House
 K-1059: Johnson lot
 K-1060: Leon Corney House
 K-6690: Mosley-Bratcher House
 Robert Carney House Site not listed
 K-6691: William Morris Carney House site
 K-6692: Frazier Carney House



Farms in the community
 as configured circa 1940



Modern intrusions
 into the community

Figure 30

Land use, infill, and contributing resources on the Mosley tract
 Source: county tax maps. Shading indicates non-contributing properties.

THE JACOB MOSLEY COMMUNITY

NAME OF PROPERTY	STATE SITE NUMBER	DESCRIPTION AND TAX MAP PARCEL	INTEGRITY	CLASSIFICATION
Levi Mosley House	K-6689	2-story frame house ED 05 67.00 01 09	Good	building
House currently on Martha Johnson Lot	K-1059	1-story old school, said to have been moved more than 50 years ago ED 05 67.00 01 13	Good	Site and possibly building
Leon Corney House	K-1060	2-story frame house site ED 05 67.00 01 16	Good	Building
Site of Mosley-Bratcher House	K-6690	2-story frame house ED 05 67.00 01 21	House destroyed	Site
Mosley-Bratcher fields		Agricultural fields ED 05 67.00 01 24, 24.01, 28	Good	Site
Site of the Robert Carney House		Site of a house known from documents and oral history ED 05 67.00 01 26	Unknown	Site
Site of the William Morris Carney House	7K-C-408	Site of a house moved to the Delaware Agricultural Museum grounds ED 05 67.00 01 27.01	Good	Site
William Morris Carney House	K-6691	House now at the museum	Excellent	Building
William Morris Carney fields		Agricultural fields ED 05 67.00 01 27.01	Good	Site
Frazier Carney House Site and Toft Elements	K-6692	2-story frame house and barn, corn crib, outhouse ED 05 67.00 01 29	House destroyed	Buildings and Site

ARCHITECTURAL INTERPRETATION

One is immediately struck by the fact that the recent infill houses stand back from the road, even though many of them were built before the county dictated setback requirements. Builders of the infill were African-Americans who sought a suburban setting during a period when housing segregation still existed in Kent County. Their houses are neat and stylish, with broad suburban front yards.

The older generation's houses were built near the road, a pattern that architectural historians have attributed to tenant houses. Because these houses were all built to be

owner-occupied, their position relative to the road cannot be explained as expressing a "tenant house" pattern. Instead, this location may speak to self-perception or defined status. Perhaps it is significant that the newest, most fashionable, and largest of the moor houses, the Levi Mosley and Frazier Carney houses, are set farther back from the road, on distinct knolls.

Floor plans of older houses were also the most conservative, consisting of single-cell blocks surrounded by working porches and exterior kitchens on the rear, the minimum possible structure to express the traditional Delaware two-story farmhouse form. All the properties, except the Johnson

property, were intended to be farms, at least large enough to provide subsistence for the owners. As parcels came available, the neighbors bought additional land, which was farmed, even though some of it needed draining before it could become useable.

The Delaware vernacular farmhouse form can be interpreted as an expression of the Georgian mind-set and the trend toward increased privacy. Respectability and social position is expressed by the existence of a formal parlor and a front porch toward the road, from which the family was shielded, to create physical and social distance between the occupants and the public.

AGRICULTURAL INTERPRETATION

Most of the \pm 95 acres once owned by community members was farmed. Deed references to ditches that still exist indicate that the boggy land was reclaimed. Although a small part of the farmland has been covered by new houses and some has gone back to trees, field boundary lines still can be traced. It should, therefore, be possible to recover considerable evidence about the farming practices of these people from the fields they cultivated.

Clearing and draining the swamps must have been labor-intensive, but expenditure of such effort does not necessarily indicate a high level of agricultural sophistication.

Analysis of evidence for agricultural practices should provide information on the nineteenth-century moors' educational level and sophistication, which has not been possible from the documentary sources.

For instance, evidence of manuring would suggest knowledge of scientific agricultural practices like those adopted by gentlemen farmers during the nineteenth century, would indicate a higher degree of education and/or sophistication than might be expected of people at the lower end of the social and economic scale.

Since the former agricultural fields have not yet been developed for

subdivisions, they offer a rare opportunity for archaeological examination of this subject. Dover's suburban sprawl is growing north through the moor home territory, consuming the farmland that might provide these answers. This tract may, in fact, soon be unique.

ETHNIC INTERPRETATION

Any study of Native American remnant groups must inquire into evidence for cultural survivals. After more than three centuries of acculturation, such evidence may be scant indeed. In the presence of such sparse remains, there is always the temptation to infer cultural significance where none exists.

One must therefore be particularly cautious in ascribing traits to the Native American heritage of the people without exhaustive verification.

It can, however, be stated that these houses were built under the control of this minority group. In this sense, these houses belong to that rare category of site where we can assign ethnic origins to both the builder and the occupants. Such features as the external kitchens may, therefore, be truly ethnic traits.

The data provided by this small survey is inadequate to make generalizations. The Native American descendant group in question has not been separately studied to the point where culture traits are identifiable. Indeed, there may not be any overt material indicia of moor ethnicity.

Because statewide cultural resource survey data is not keyed to ethnic affiliations of builders, it is impossible to state on the basis of available data that there is a "moor" style of house, or that the tofts of these people should betray any features absent from the homes of others. The issue of ethnic affiliation of the built environment has been gingerly avoided by some researchers and glossed over by others, with the result that there is no solid basis upon which to distinguish clusters such as this.

11. WILLIAM MORRIS CARNEY'S TOFT

THE CARNEY FARMHOUSE (K-6691) is the centerpiece of the Delaware Agricultural Museum in Dover. This house formerly stood in the project area (7K-C-408), on the west side of McKee Road (PLATES 30-32). William Morris Carney and his wife Sallie built the two-story clapboarded frame house in 1893. Their grandson, Noland Morris, sold it in 1970.

As originally built, the house contained four rooms upstairs, two rooms downstairs, and a detached kitchen. The kitchen now located next to the house is not the original structure. As interpreted by the museum, the house is a representation of a typical smallholder's house of the period, based in part upon Carney family data.

In October 1893, William Morris "Mike" Carney bought an eleven-acre woodlot from Rev. John P. DuHamel and his wife. This tract was part of a larger woodlot that had been subdivided among heirs of John Pleasanton, who included the DuHamel.

Sallie Carney bought five acres from Isaac Mosley on the side of the "new" public road in January 1885. The neighbor to the north was Robert Carney. On the south the land was bounded by the rest of Mosley's ten-acre farm. Isaac Mosley and Robert Carney had obtained their properties from Jacob Mosley in October 1884.

The Carneys built their homestead on the five acres. He was a carpenter by trade, and owned tools of the blacksmith's trade as well. The family consisted of her son, Thomas Ridgeway, and their children, Ray Frazier Carney; Elizabeth ("Lizzie"), who married Carlos Morris; and Sallie, born in 1905, who married Samuel Horace Durham.

On Mike's death in 1925, his widow enjoyed life rights until her death in 1949. Real estate in the 1925 appraisal consisted of 30.5 acres at the homesite and a half interest in 19.75 acres on the road from Moores Corner to Dinahs Corner. After Sallie's death, Lizzie was to receive five acres of

woodland and the north seven acres of the home farm (FIGURE 30). The rest was conveyed to Frazier, together with the blacksmith shop and his share in the tools. Sallie left the household goods to Lizzie and the farming implements to their son.

Carlos and Elizabeth Morris celebrated their fiftieth wedding anniversary in the house in 1956, with more than 350 family and friends in attendance.

In 1970, Noland Morris, their son, sold the property out of the family to Homer Minus, a dentist who held it as investment.

Dr. Minus gave the house to the museum when an earlier McKee Road improvement threatened to encroach upon its original site (DelDOT Contract 80-012-03). Since the house was moved to the museum, it has been extensively researched and restored. As a result, it is one of the best-documented properties in the community.

HISTORICAL ARCHITECTURAL CONTEXT

The two-story frame Carney house, as it now exists at the museum, is a hall-and-parlor house built in the one-room-plan tradition. The front room was the formal parlor, containing the best furniture and the pump organ. It opened on the primarily decorative front porch that faced McKee Road.

Behind, with its gable at right angles, was a second block, also consisting of one room, which would have, in earlier times, been called the hall. This room opened onto two functional back porches, one of which connected to the kitchen. Here the family worked, ate, and socialized.

The rear first-floor room contained two back outside doors, the stairway to the second floor, and the stove that provided much of the family's winter heat.

Early settlers, in their single-cell houses, had performed most household chores in a "hall," or common room, that served for food preparation, handwork, and sleeping. As houses became larger, cooking

and other rough chores were banished to an outside kitchen; separate chambers and parlors were created inside the main house. The hall became the dining or sitting room (Herman 1978:63).

Outdoor or "summer" kitchens were no longer fashionable by the time the Carneys built their house, but they had one. Three of the four houses that were studied in the McKee Road community also had their external kitchens, which were later joined to the houses by enclosed porches

According to Bernard Herman, kitchens commonly were incorporated into the main bodies of houses built after the middle of the nineteenth century in Delaware (Herman 1987: 195). Herman's data, however, is not generally applicable because it draws excessively upon surveys of middle - class European - Americans' households.

In more spacious and stylish houses at the turn of the century, the kitchen was a room in the rear of the house, convenient to the back door. It was segregated from the main house by a dining room and sometimes by other rooms and pantries. If space

permitted, larger houses would be equipped with formal "parlors" and less formal "sitting rooms" for family relaxation. Today's functional equivalents are called the "living room" and "family room."

Ability to maintain a formal parlor was considered a mark of gentility or aspirations to it. In some households, with many rooms, several parlors might exist, for use only on formal occasions.

The Carneys devoted a quarter of their limited indoor space to the parlor, as did their neighbors. According to family sources, the parlor contained a pump organ and the family's better furniture.

Two back porches were the focus of family and farm activity. On the south side of the rear ell a covered porch gave access to the pump. A grapevine grew along the back of this porch. On the north was a porch that connected the house with the kitchen and served as a work area for kitchen-related activities. When the house stood on its original site, the north porch had been enclosed, as had the porches on the other surviving houses.

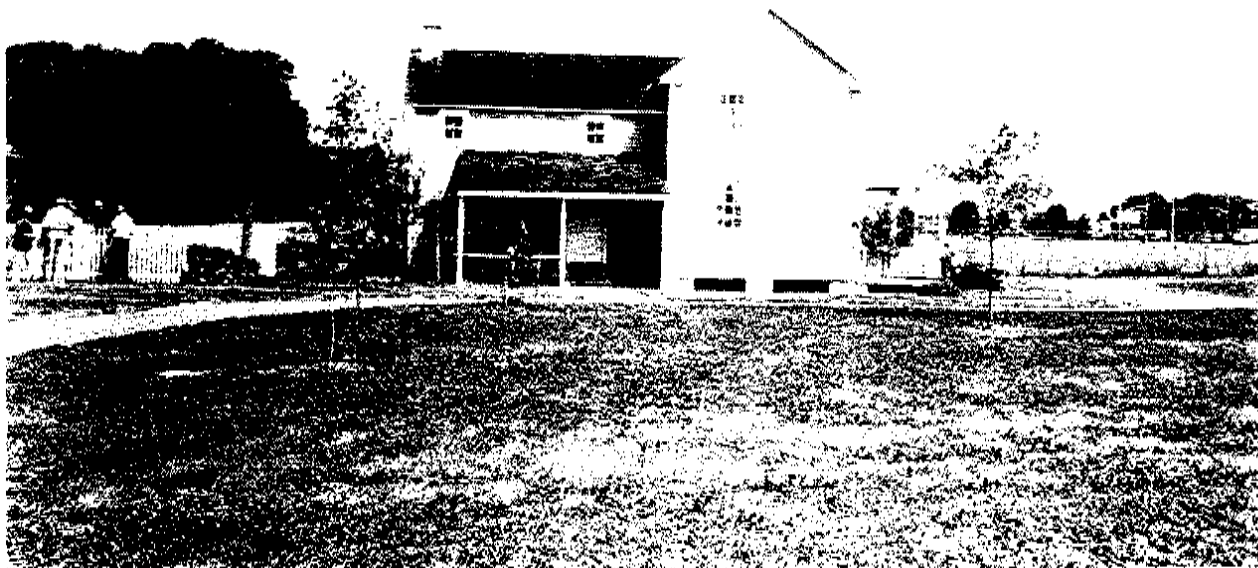


Plate 30

William Morris Carney House, now at the museum grounds, looking north



Plate 31

William Morris Carney House at the museum, from the southeast



Plate 32

William Morris Carney House at the museum, from the northeast

William Morris Carney Lot

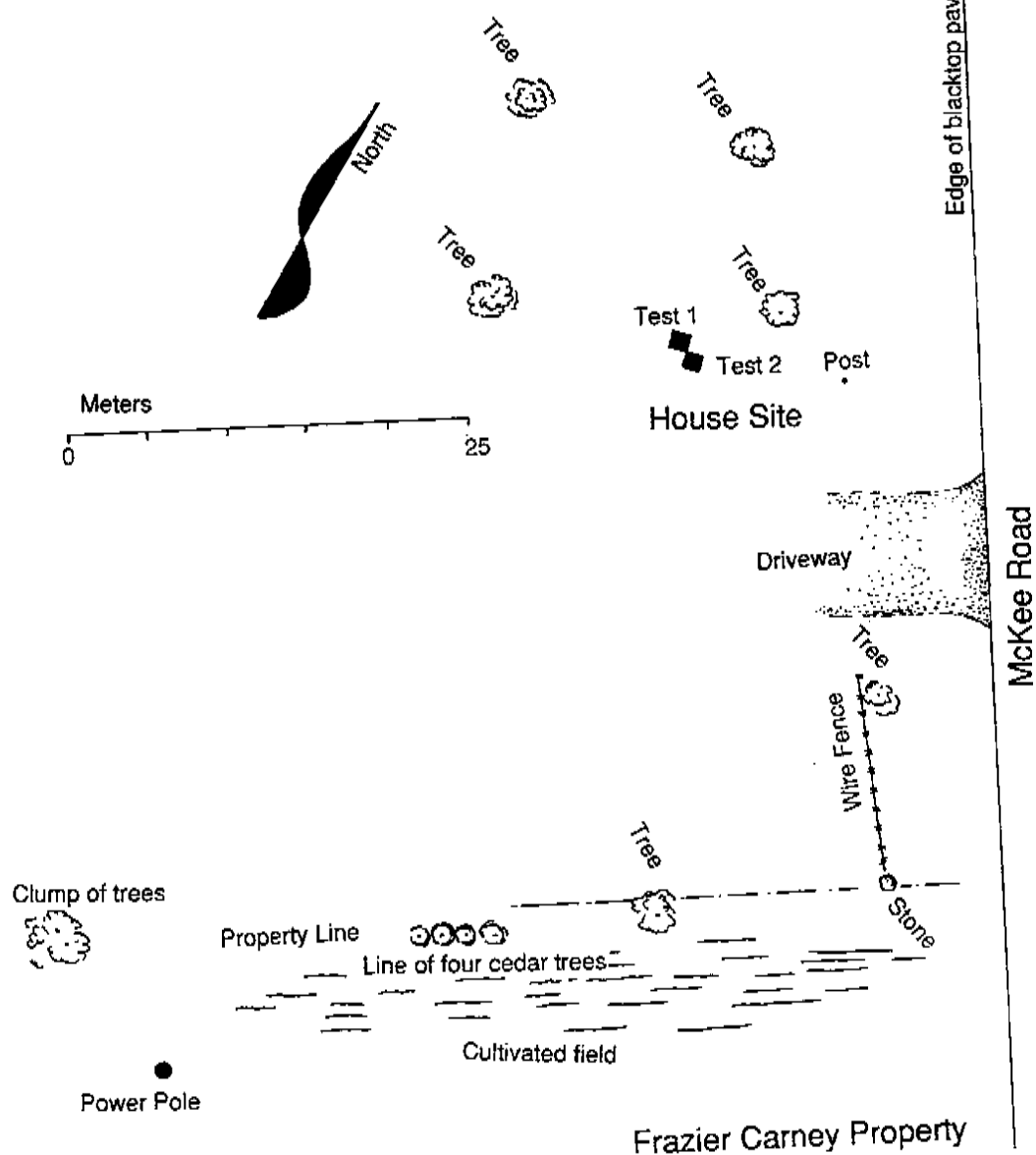


Figure 31

Test units and landscape features on the William Morris Carney site

ARCHAEOLOGY ON THE CARNEY SITE

The moved house at the museum has been thoroughly documented and furnished for public view, but its site had never been examined to determine if intact subsurface remains might survive. Since one aspect of Mosley community significance is its archaeological value, subsurface tests were considered necessary to logically complete this study.

A Phase I archaeological study of the William Morris Carney toft site was begun October 21, 1992. First, the site was mapped (FIGURE 31) and features from the occupation period were identified. Most of the yard was covered with a thick turf of tall grass, and no built features were visible above grade. Two three-foot-square tests (FIGURE 32) were excavated, in which structural remains were immediately encountered.

In the first test, a layer of yellow fill lay immediately under the turf. Beneath the yellow fill was a pile of bricks, many of them still intact, lying in a relatively coherent tumbled pattern. A smooth brown sandy topsoil, typical of a domestic planting bed, lay under the fill. It overlay a mottled yellow natural layer rich with rootmolds, again typical of a cultivated garden bed.

A second test, diagonally adjacent to the first, also contained a layer of fill under the turf. This fill layer was uniform, and a little darker than the fill in the first test. Immediately beneath the fill was a piece of sheet metal, which was lying on an apparent old ground surface. This surface was marked by two bricks that had been set into it, and a layer of clam shells, with their outer sides facing up, as if to form a pavement.

Under the clam shells was the sandy brown garden soil, which contained artifacts. Two distinct depressions, probably garden beds, appear in the profile of this unit.

Materials recovered from test 2 include asbestos siding fragments and parts of four dishes. When the sherds were reassembled, it was apparent that this was a

primary deposit of trash, since each dish was represented by a single large fragment that had been deposited and later fractured into the sherds we found lying close to one another in the former flower bed soil.

The four dishes were all different, suggesting that they might not have been part of sets. They appeared to be similar mass-market white refined earthenware. Their location, near the kitchen site, suggests that they were broken in use by the site's occupants and represent the wares used by the Carney family.

From this evidence, it appears that the house site was subjected to mere cosmetic cleaning and filling after the house was removed. An unknown amount of fill was spread across the site and turf was established atop the fill. Under the thin fill layer, one can expect the archaeological evidence of the toft to retain considerable integrity.

Current plans do not call for any part of the property to be taken. If future plans should include any part of this tract, additional testing should be undertaken.

Since this site also is historically part of the Nathan Williams lot, and lies directly opposite the heaviest concentration of artifacts in the field, it should be considered potentially a part of that archaeological resource.

Additional excavations would provide valuable information that would be useful to the museum interpretation of the house, both as an exhibit and as a document. The lot is therefore likely to be found eligible for the National Register under criterion D, for its information value.

While the house and toft site are no longer located in the same place, they constitute a single property for study purposes, just as the Elgin Marbles remain an essential part of the Parthenon. The site still can tell us volumes about the house, which has become an important vehicle for study and exposition of nineteenth-century Delaware farmlife.

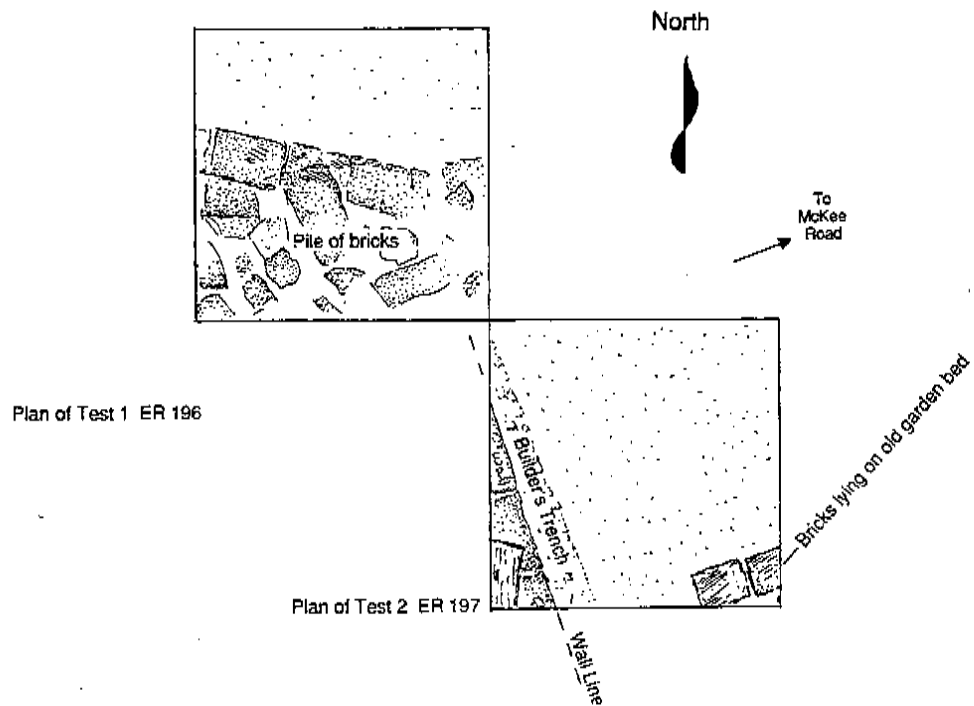
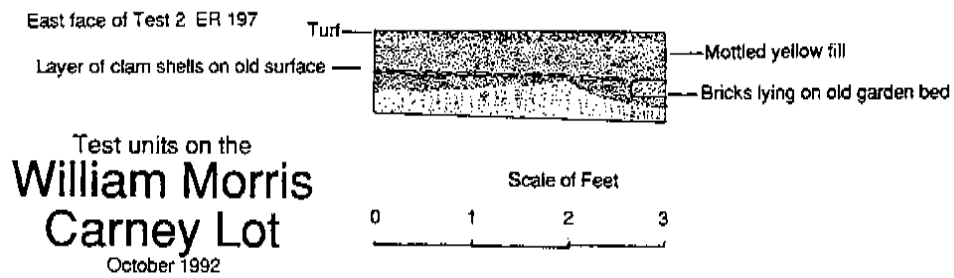


Figure 32

Plans and profiles of test units on the William Morris Carney house site

12. FINDINGS AND CONCLUSIONS

THE CURRENT INVESTIGATION has identified sites and standing structures that span the length of human occupation on the local landscape. They can be grouped into four categories:

1. Properties that are immediately eligible for the National Register of Historic Places.
2. Properties that almost certainly are eligible, but require further research at the Phase II level in order to meet the technical requirements of registration, such as definition of boundaries.
3. Properties that are culturally interesting, but not qualified for listing in the National Register.
4. Properties that do not possess the quality of significance and need not be further considered.

If a property falls into one of the first two categories, three treatment options are available for consideration:

1. The property can be avoided by the proposed project. Plans can be modified to accommodate preservation.
2. If the property cannot be avoided altogether, the impact of the project can be reduced to an acceptable minimum.
3. If the property cannot be avoided, the impact must be mitigated, which frequently means excavating an archaeological site. In the case of standing structures or buildings, it means architectural recordation, which routinely should be accompanied by archaeological examination of both buried and above-ground elements.

Results are shown in table form on page 93. All three alternate treatments are recommended for properties in the corridor.

SITES EAST OF ST. JONES RIVER

Three properties east of the St. Jones River were investigated. During an earlier survey of the broader corridor, significant sites were identified east of the river, but it was determined that they did not overlap the current project's impact area. Within the selected right-of-way, three areas were investigated. All were found to be ineligible under criterion D because they have not yielded significant information, and there is no reason to believe that further digging would yield additional information.

FORD FARM SITE LOCUS E

The prehistoric site, or node in a larger cluster of sites, in the proposed right-of-way is clearly significant. While its eligibility for the National Register is unquestioned, additional (Phase II) tests will be necessary to determine its extent within the proposed right-of-way. For this purpose, we recommend a linear series of tests, similar to the ones already undertaken, to sample all the apparently undisturbed areas of the bluff within the right-of-way, as well as a larger test.

During Phase I tests, the one-meter squares were so narrow and deep that investigators were unable to see and interpret soil profiles, and it was impossible to investigate a large apparent feature that first appeared at 120 centimeters below the surface.

We recommend that the vertical extent of the stratified part of the site be tested with a single pit, as much as four meters square. Because the site contains complex and very deep strata, a large test unit is a logistical necessity. Such a unit would be large enough to detect features and buried landscape elements and would increase the likelihood of interpreting artifacts in contexts.

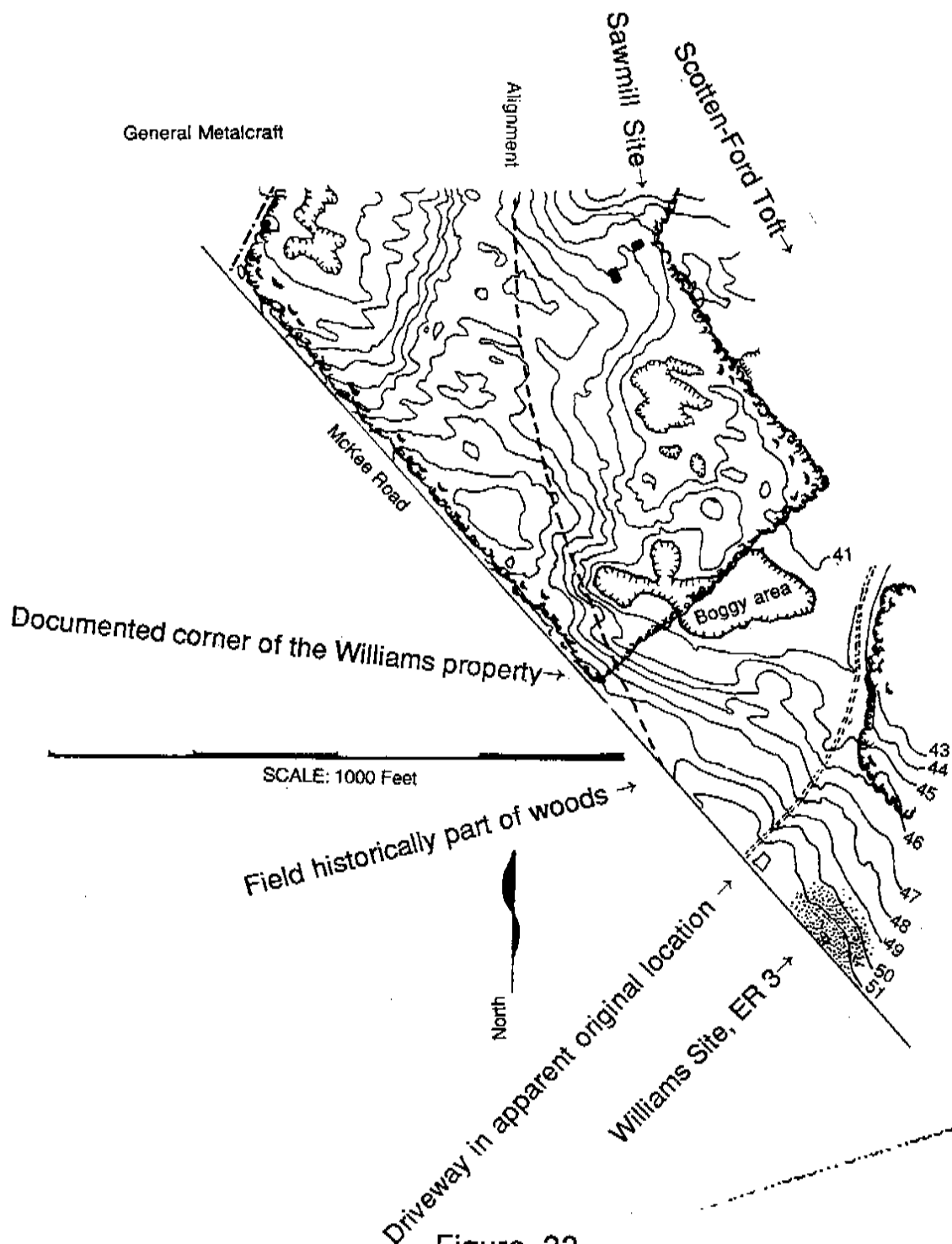


Figure 33

Impact on Nathan Williams Site and Sawmill

Dashed line is centerline. Shading indicates central concentration of Williams site

Source: based upon DeIDOT construction plans

FORD FARM SITE FIELD LOCI (A, B, C)

During the original survey of the corridor (Heite and Blume 1992), the authors identified several minor concentrations of prehistoric artifacts.

These loci were catalogued with the Ford Farm site. These concentrations, located on high ground near bay/basin features, were interpreted as plow-disturbed minor procurement locations, to be catalogued but not further tested. Given their low priority in the state management plan (Table, page 95), they are not eligible for the National Register.

SCOTTEN-FORD AGRICULTURAL COMPLEX

The Scotten-Ford toft, including the sawmill, is a remarkably complete representative example of an early twentieth-century farmstead, with surviving structures representing every major movement in Kent County agriculture. It certainly is eligible for the National Register, for its demonstrated ability to contribute to our understanding of the technological history of agriculture and for its completeness as a district, as demonstrated in the table on page 96.

The sawmill site is the most vulnerable part of the complex. Its significance lies in the fact that its archaeological evidence is intact. Most of this evidence consists of tools and insignificant-looking bits of metal, which could be innocently removed or disturbed by curious construction workers or casual visitors.

Protection of the fragile sawmill remains should be among the highest preservation priorities.

The farm buildings will suffer only visual impact, which can be minimized or fully mitigated by planting. Visual intrusion is a minor problem, compared to the possible physical effects of the new road's construction on the economic and archaeological resources. Loss of arable land, a significant part of the original Scotten holding, might endanger the viability of the entire farm as a going concern and thereby endanger the continued survival of the historic resources as a system.

NATHAN WILLIAMS SITE

Tests confirmed that the Nathan Williams toft site possesses integrity as well as significance. It is also Register eligible, and boundaries are suggested, based upon artifact locations and natural borders. No further Phase II tests are recommended.

Current plans call for the site's core to be included in the new road's right-of-way. If it cannot be avoided, the site should be fully excavated.

Part of the original Williams holding lies west of the present road, and actually contains the sites of the four houses that are no longer standing in the Mosley community. There is a remote possibility that remains of the Williams toft survive on the four acres, eighteen square perches west of the road. Therefore, this area should be treated as a high-probability area and archaeologically tested at the Phase II level before any construction is contemplated there.

MOSLEY SETTLEMENT

The settlement along McKee Road, established a century ago by Jacob Mosley, represents an intact record of a former ethnic community. It meets more than the minimum criteria for its identification as a district (Table, page 96). When this study began, only one house had been lost, and one other had been moved for preservation. A third house, the Frazier Carney House, was burned to the ground by the Robbins Hose Company while the study was under way. The Mosley-Bratcher house met a similar fate as this report was going to press.

The site of the moved William Morris Carney house is significant, has subsurface integrity and is eligible under criterion D. Archaeological tests confirmed that subsurface features exist.

Agricultural features attached to these tofts remain untouched by surrounding urban sprawl. The potential significance of these visible features and their buried counterparts for the study of agricultural archaeology cannot be understated.

SUMMARY OF RESOURCES

PROPERTY NAME	LEVEL OF SURVEY ACCOMPLISHED	CULTURAL AFFILIATION	NR CRITERION APPLIED	AREAS OF SIGNIFICANCE OR OF INTEREST	STATE PLAN PROPERTY TYPE	NR PROPERTY CATEGORY
1. ELIGIBLE RESOURCES:						
Scotten-Ford Agricultural Complex	Phase II surface reconnaissance and photo recording	European-American	A, D	Industrial archaeology Industry Agriculture	Field Toft Structure	District
Mosley Rural Archaeological and Historic District	Phase II test squares and photo recording	Acculturated Native American	A, D	Archæology Ethnic heritage Agriculture	Field Toft	District
Nathan Williams House Site	Phase II	African-American	D	Agriculture Archæology Ethnic heritage	Field Toft	Site
Delaware Rail Road (Conrail)	Reconnaissance (as part of the Scotten-Ford toft survey)	European-American	A	Transportation	Railroad	Structure
2. REQUIRE FURTHER SURVEY:						
Ford Farm Locus E	Phase I test squares	Prehistoric Native American European-American	D	Prehistoric archaeology Recreation	Procurement Undirected recreation	Site
3. INTERESTING, BUT NOT ELIGIBLE:						
Trailer Sales	Phase I machine trenches	European-American	D	Agriculture	Ditch Field	Site
Athletic Field	Phase I test squares and machine trenches	European-American	D	Agriculture	Ditch Field	Site
White Marsh Open Field Locus	Phase I test squares, shovel test pits, and machine trenches	European-American	D	Agriculture	Field Manuring spread	Site
4. INELIGIBLE:						
Ford Farm open field loci (A, B, C)	Phase I Walkover only	Aboriginal	D	Prehistoric archaeology	Procurement	Sites

AGRICULTURAL/INDUSTRIAL ARCHÆOLOGY

Investigations of the Scotten-Ford toft raise serious planning questions relative to industrial archaeology in rural Delaware. The

sawmill remains on the site are an important resource with high integrity. Taken together, the sawmill and the adjacent toft constitute a potentially valuable resource for students of the industrial archaeology of agriculture.

The Scotten-Ford property and the Mosley community are together the same property John Pleasanton left to his children, with the addition of twelve acres to the north. Land use, including ground cover, on this tract can be documented back to the eighteenth century. It is even possible to delineate tenant holdings back 200 years.

After a period of absentee ownership and neglect, the tract was divided between two sorts of resident ownership, which can be compared and contrasted archaeologically.

Aside from the fact that it may be the only surviving farmland in Kent County that has never been farmed by anyone but moors, the Mosley community could provide a valuable archaeological window into the lives of smallholders generally; the surrounding farms, including the Scotten-Ford tract, were farmed under different economic and social conditions that might also have left a characteristic archaeological fingerprint.

ASSESSING CROFT SIGNIFICANCE

The five criteria for evaluation of historical archaeological properties can be applied to agricultural fields, because they are just another category of site, as discussed on page 22. Industrial aspects of an agricultural site can, and should, be evaluated against the industrial criteria discussed on pages 28 and 29, above.

In the case of fields, our information base is not yet robust enough to derive criteria for evaluation. Some tentative ideas can, however, be put forward and applied experimentally. The following suggestions are proposed as a broad outline for evaluating at context that would include the industrial archaeology of agriculture.

Documentation: Documented sites of agricultural experiments, or sites where husbandry processes are well documented, can yield more information than undocumented sites. Of particular interest would be the home farms of members of agricultural reform groups.

Integrity: An agricultural field's potential archaeological integrity can easily be assessed by superficial examination. If ditches are clearly visible, old hedgerows are still in place, and the field boundaries can be clearly seen, the property almost certainly possesses subsurface integrity. Patterns of plowscars can be seen by stripping, and these in turn can be used to interpret change in husbandry practice.

Representativeness: If one seeks to formulate general principles, he or she must identify representative sites. A taxonomy of sites, the first step in any formal survey strategy, is needed for agricultural field sites.

Research questions and needs: Since agricultural sites are industrial, research questions should parallel those of industrial archaeology, discussed on page 30. These questions include technological innovation, working conditions, ethnicity, gender, diet, standards of living, and family structure.

Association with a person: Fields cultivated by individuals, such as pioneer researchers, may shed light on these persons' careers. But on a broader stage, an agricultural field might reveal considerable information about ethnic or economic groups and their places in society.

Fields on the former Pleasanton property possess a high potential in no less than three categories (Table, below).

APPLICATION OF DELAWARE MANAGEMENT PLAN CRITERIA FOR EVALUATION OF HISTORICAL ARCHAEOLOGICAL SITES ON THE PLEASANTON TRACT (See pages 28-29 for a discussion)

<i>Property Name</i>	<i>Documentation</i>	<i>Archaeological Integrity</i>	<i>Representativeness</i>	<i>Research Question and Needs</i>	<i>Association with a Person</i>
Ford Sawmill	Good	Excellent	Excellent	Good	not applicable
Nathan Williams	Poor	Fair	Unknown	Excellent	significant
Mosley Community	Excellent	Excellent	Unknown	Excellent	significant
Scotten-Ford Farm	Excellent	Probably good	Good	Excellent	not applicable

APPLICATION OF DELAWARE MANAGEMENT PLAN CRITERIA
FOR EVALUATION OF PREHISTORIC ARCHÆOLOGICAL SITES
(See page 14 for a discussion)

CHARACTERISTICS IN DESCENDING ORDER

LOCI IDENTIFIED

HIGH POTENTIAL SIGNIFICANCE:

1. Any site that has never been plowed
2. Plowed but otherwise undisturbed
3. Plowed base camps of any time period

Ford Farm locus E (in project area)

MODERATE POTENTIAL SIGNIFICANCE:

4. Plowed sites associated with bay/basins

LOW POTENTIAL SIGNIFICANCE:

5. Plowed, disturbed and eroded sites
6. Plowed procurement sites

Ford Farm open field loci

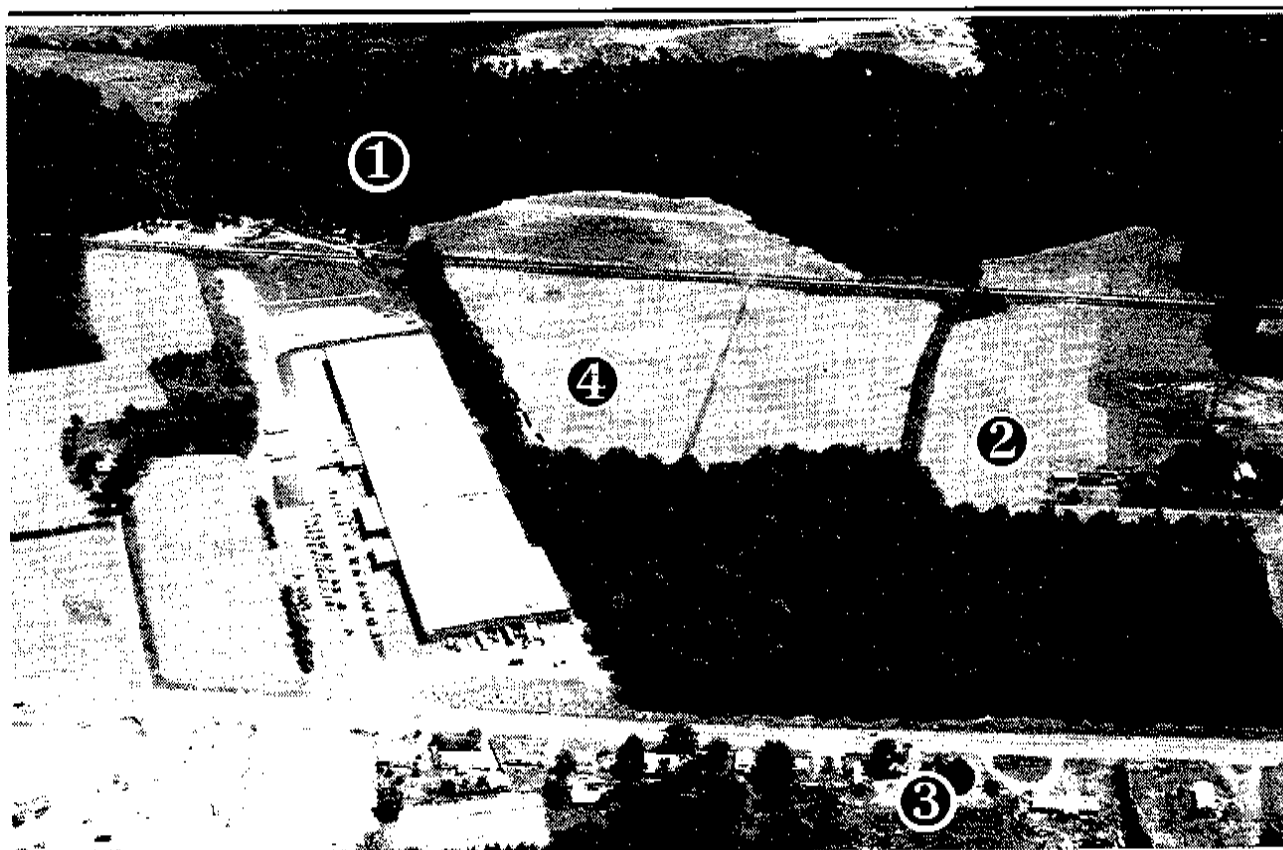


Plate 31

Project area from the west

Dashed line represents proposed route through the former Pleasanton tract.

1. Location of tests along river in Ford Farm site, locus E.
2. Scotten-Ford toft. 3. Mosley community. 4. Ford Farm open field loci

SCOTTEN-FORD AND MOSLEY DISTRICTS ON THE PLEASANTON TRACT
APPLICATION OF NATIONAL REGISTER DEFINITIONS OF A DISTRICT
(See National Register Bulletin 16a, 1991, pages 15, 56-57)

DEFINITION

Possesses significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development

The term district applies to properties having large acreage with a variety of resources, such as a large farm, estate, or parkway

The term district applies to properties having a number of resources that are relatively equal in importance, such as a neighborhood.

Boundaries at a specific time in history may be considered for delineating boundaries

Districts usually consist of contiguous elements.

A district might contain discontinuous elements when visual continuity is not a factor

Methods for determining boundaries of archaeological districts include surface observation of site features, topographic or natural features, and land alterations. A study of documents may also be used.

Archaeological districts may contain discontinuous elements when one or several outlying sites has a direct relationship to the significance of the main portion of the district through common cultural affiliation or as related elements of a pattern of land use and when the intervening space does not have known significant resources.

SCOTTEN-FORD

Historically linked by common ownership by one family for a century.

Features of the site are linked by function.

The property contains a variety of resources.

Boundaries represent the area bought by the grandfather of the present owners a century ago and cultivated by the family during the period of significance.

Except for a railroad (possibly a contributing element) the entire tract is contiguous.

Visual continuity is not an issue.

Surface features of agricultural fields are clearly visible.

Documentation provides clear boundaries for the activities under study.

All parts are contiguous.

MOSLEY

Historically linked having been developed and occupied by a close-knit ethnic group that maintained identity here.

Features of the site are linked by the original development plan that still prevails over most of the property.

The various moor tofts are relatively equal and formed a neighborhood of farming households occupied by related members of the same ethnic group.

Boundaries describe the property bought by the founders of the community a century ago and cultivated by their group during the period of significance.

Fields, which possess high integrity and agricultural significance, are contiguous with the residential portions of the district.

Visual continuity is immaterial in the quality of significance in the area of agricultural history or ethnic history. Visual continuity is unrelated to ethnicity

Surface features of agricultural fields are clearly visible.

Documentation provides clear boundaries for the activities under study.

Field features are well defined by long-established boundaries.

Discontiguous parts of the district are linked by common agricultural practice and by family relationship between the cultivators of the farmland. The fields themselves are important archaeological resources. Dispersed tofts possess significant common characteristics that are more valuable as a group than as individual sites. The tofts are parts of a group of croft sites, the contiguity of which has not been disturbed.

PLANNING PRIORITIES

Studies in connection with this project have brought into question some of the state's planning priorities. In particular, Delaware has made no provision for dealing with industrial archaeology, even though surrounding states have made considerable contributions to the field.

In the state's comprehensive preservation plan, industrial sites are only barely, if not grudgingly, acknowledged (Heite 1990:115; Ames, Callahan, Herman and Siders 1989:80).

The state management plan for historical archaeology ignores the well-established subdiscipline of industrial archaeology altogether, even in the discussion of industrial sites and in discussions of other states' guidelines that refer to IA.

Since the subject is not addressed by existing planning documents, Delaware needs a separate industrial archaeological management plan, reflecting professional standards and concerns of that subdiscipline. Formulation of such a plan should be assigned the highest planning priority, and qualified industrial archaeologists should be consulted whenever industrial sites are evaluated during survey activities.

In the necessarily interdisciplinary practice of industrial archaeology, one does not arbitrarily shift one's methodology at grade. An above-ground example of a particular property type is not functionally different from a below-grade example that has been redefined by happenstance into an "archaeological resource" rather than a "standing structure." If the preservation program is to consistently recognize resources because of their historical value, it follows that approaches to standing and non-standing structures must be seamlessly continuous.

Carried to a logical extreme, this argument could be used to challenge the logic of having a separate management plan for buried "archaeological" resources. Without going too far down the path toward academic nihilism, it should be possible to blur disciplinary boundaries enough to serve each

resource on its own merits, independent of artificial disciplinary constraints and semantic paradigms.

Unfortunately, as one eminent archaeological practitioner has lamented, "All interdisciplinary effort goes against the grain of current university departmental structures" (Rapp 1992).

EFFECTS OF DEPARTMENTALISM

The same body of evidence will evoke different responses from different observers, depending upon the academic system they represent. In the cultural resources community, there are two different and sometimes mutually exclusive systems of scholarship: the art-historical and the culture-historical. These two systems will interpret the same object differently and define significance from different points of view.

Each system is further divisible into disciplines and subdisciplines. A researcher calling himself an architectural historian might come from a purely art-historical background, trained to look at a building in terms of architectural schools and systems of elaboration. A person self-described as a document-oriented historian might define the building as nothing but the container in which events occurred. An archaeologist, on the other hand, might see the same building as a document, or part of a document called a site, that can reveal small details or larger truths about the people who occupied it.

Citing identical evidence, each of these three individuals would nominate the same hypothetical building under a different National Register criterion. Indeed, the nominations could be so radically different, that it would be difficult to determine that they were describing the same resource. Unfortunately, the system has assigned certain classes of resource to the province of particular disciplines, ensuring that interpretation will be limited to one-dimensional, single-viewpoint outcomes.

PROPERTY TYPES ENCOUNTERED

During this project, expected property types were found. Prehistoric procurement sites, rural residential tofts, agricultural fields, and drainage ditches, were identified

at the outset. Sawmills, a component of forestry, were investigated in some detail.

In the first survey report on this corridor, the authors suggested the addition of several functional property categories: undirected recreation properties and casual resource areas (Heite and Blume 1992:98)

More detailed examination of the agricultural croft as an industrial property type led to creation of a more detailed outline of this topic, supplementing the outline in the state planning documents. The following property types were identified in the project area:

- Economic and Cultural Trends
 - Agriculture (croft areas)
 - Products
 - Nursery/Orchard
 - Methods
 - Cultivation
 - Plowing
 - Plow Scars
 - Enclosures
 - Field Edges
 - Drainage and Irrigation
 - Ditches
 - Fertilization
 - Manuring spread
 - Fertilizer residue
 - Forestry
 - Sawmills
 - Mining/Quarrying
 - Borrow pits
 - Sand pits
 - Brick clay pits
 - Casual resource areas
 - Transportation and communication
 - Land
 - Railroad
 - Community Organizations
 - Recreational and cultural
 - Organized athletic fields
 - Tennis courts
 - Baseball diamonds
 - Undirected recreation
 - Dirt bike tracks
 - Sand-pit shooting

UTILITY OF DATA AND METHODS

This is a data-rich survey corridor, where one is almost certainly assured of finding cultural resources at any spot. Excellent documentary resources and good settlement models made site identification easy.

The only unexpected resources were the large number of features at the eastern end of the project area. The pathetic struggle of man against water in Delaware clay soil was amply illustrated by agricultural remains in that area. These findings alerted the researchers to the need to pay more attention to the agricultural field as a research subject.

The most serious constraint on the realization of project objectives was departmentalism. Early in the project review cycle, the consultant was directed to evaluate standing structures from an architectural historical perspective, when the logical approach was to treat the moor community as an archaeological district, and the houses as artifacts therein.

Ironically, recognition of the houses has colored all evaluations of the district, diverting attention away from the equally informative non-building elements.

By linking significance narrowly to the standing structures, and by describing the district in terms of houses, one ensures that significant agricultural and archaeological remains will be removed from protection after the removal of the houses, which is happening now

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PRIMARY SOURCE MATERIAL

- Hopkins Survey Book
1735 Reference Reel R-74,
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- Kent County Recorder of Deeds
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- Kent County Register of Wills
Microfilm copies of bound probate record books at the Register of Wills office, County Administration Building, Dover.

APPENDIX 1: EXCAVATION REGISTER

ISLAND FIELD MUSEUM ACCESSION NUMBER: 90/23/ ...
ALL SITES ARE LOCATED ON THE DOVER USGS 7.5' QUADRANGLE AND SPO MAP 10-11-22

REGISTER OF THE NATHAN WILLIAMS SITE

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3	Nathan Williams House Site K-6454 7K-C-389	Surface collection from a house site immediately adjacent to McKee Road on the Ford Farm. SaB	<p>1 sherd white porcelain 1 piece dark green bottle 3 pieces bluish clear bottle 1 piece clear bottle 1 milk glass jar lid liner 1 sherd blue decorated grey stoneware 1 sherd red earthenware dark glaze in & out 1 sherd red earthenware glazed one side 1 rimsherd blue edge decorated pearl body 11 sherds other white earthenware</p> <p>1992 surface collection: oyster shell fragments handmade brick fragments commercial brick fragments mortar lumps with cinder inclusions roofing slate coal/cinders 2 joining pieces late 18th C. dark green bottle base 1 dark green glass cast bottle rim 2 dark green glass bottle body sherds 1 green blown glass pharmaceutical bottle base fragment, with a very high kickup (possibly late 17th C.?) 1 fine white saltglazed stoneware sherd 2 slip-decorated redware sherds 1 aqua glass bottle rim 1 heavy aqua glass bottle base 1 thin aqua glass bottle base 1 aqua glass bottle base with slight kickup, possibly burned 2 plain aqua glass bottle body sherds 1 embossed aqua glass bottle body sherd, letters CI 1 aqua glass fragment with a pebbly (abraded) surface, probably from a vessel 1 small aqua window glass fragment 1 small clear window glass fragment 1 pale green bottle glass body sherd</p>

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3, continued			<ul style="list-style-type: none"> 1 embossed green glass bottle body sherd, letters . HLLA. . 1 brown bottle glass body fragment 1 bright green bottle glass body fragment 1 amethyst pharmaceutical bottle neck and rim 1 amethyst bottle neck with neck ring 1 amethyst interior fluted tumbler base and side 1 amethyst tumbler base with moulded base 1 clear glass faceted tumbler body sherd 1 thick clear glass faceted tumbler body sherd 1 clear machine-made tumbler sherd 2 plain pearlware body sherds 2 plain pearlware foot ring sherds 2 early blue shell-edged pearlware 2 later blue shell-edged pearlware 2 banded pearlware sherds, probably from the same vessel 2 handpainted blue pearlware body sherds 1 transferprinted pearlware body sherd 1 other blue decorated pearlware body sherd 1 American grey salt-glazed stoneware with Albany slip interior 1 American grey salt-glazed stoneware sherd, possibly from a spout 9 CC body sherds 2 CC rim sherds 11 ironstone body sherds 3 ironstone basal sherds with foot rings 1 ironstone lid sherd 4 ironstone rim sherds 3 handpainted refined ware rim sherds 1 handpainted refined ware body sherd 1 multi-color sponge decorated body sherd 1 pale blue banded rim sherd 1 green banded body sherd 2 light blue transfer printed sherds 1 black transfer printed porcelain rim sherd 3 plain white porcelain rim sherds 1 thick porcelain body sherd 3 lead-glazed redware body sherds 1 lead-glazed redware rim sherd 2 unglazed redware rim sherds (probably flowerpots) 13 black glazed redware body sherds 1 black glazed redware basal sherd 1 black glazed redware rim sherds 7 redware sherds with one or more surfaces missing 2 flat iron fragments 1 quartz chunks 1 fire-cracked rock fragment

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3a	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A tight pattern of crescent-shaped marks in the top of the yellow subsoil, apparently resulting from impacts inflicted by a round shovel, associated with a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3b	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. Linear feature, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	2 pieces coal/cinder 2 sherds red-bodied earthenware with surfaces missing
3c	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A rootmold found within deposit 3d, a posthole, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3d	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A posthole, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3e	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A square postmold, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3f	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. An amorphous shallow pit, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	1 sherd white refined earthenware
189	Nathan Williams House Site K-6454 7K-C-389	Surface collection on the field north of the driveway into the Medford Ford farm. This area was part of the Nathan Williams property, and was wooded until the present century.	No artifacts were retained

REGISTER OF THE FORD FARM SITE, LOCUS E

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
190	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 20 cm. below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	1 quartz chunk 2 fire-cracked rock fragments
190a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 20 to 30 cm. below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	No artifacts
190b	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 30 to 40 cm., below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	No artifacts
191	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 25 below the surface of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	1 pebble 2 heat-reddened pebbles 1 quartz non-cortex flake, 24 mm. 1 chert non-cortex flake, 26 mm. 1 fire-cracked rock fragment
191a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 25 cm. to 40 cm. below the surface of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	No artifacts
192	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 30 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	1 heat-reddened pebble 1 Dames Quarter body sherd 1 chert non-cortex flake, 26 mm. 1 pebble core 4 fire-cracked rock fragments
192a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 30 to 35 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	2 nails 1 whiteware sherd 1 quartz non-cortex flake, 18 mm. 1 fire-cracked rock fragment
192e	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 35 to 45 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	No artifacts
193	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 25 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 slate fragment 1 heat-fractured pebble fragment 1 jasper cortex flake, 14 mm.

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
193a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 25 to 40 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 jasper cortex flake, 25 mm. 1 chert core fragment 1 fire-cracked rock fragment
193e	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 40 to 60 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	5 pebbles 1 broken jasper side-scraper
193i	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 4, 60 to 75 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	2 heat-fractured pebble fragments 1 quartzite cortex flake, 32 mm. 1 quartz core
193m	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 5, 75 to 85 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 pebble 1 fire-cracked rock fragment
193q	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 6, 85 to 95 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 pebble
194	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 15 cm. below the surface, of a 1 meter test unit located between 20 and 21 meters on the second traverse.	3 heat-reddened pebbles
195	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 20 cm. below the surface, of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 oyster shell fragment 1 piece coal 1 heat-reddened pebble 1 jasper non-cortex flake, 22 mm. 1 thick jasper non-cortex flake, 25 mm. 1 chunk granular quartz with mica inclusions, possibly fire-cracked
195a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 20 to 45 cm. below the surface, of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	2 oyster shell fragments 1 heat-reddened pebble 1 quartz chunk 1 chert chunk 1 jasper cortex flake, 14 mm. 1 fire-cracked rock fragment, possibly used as a grinding stone

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
195e	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 3, 45 to 70 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 heat-reddened pebble 1 chert non-cortex flake, 15 mm. 1 jasper cortex flake, 18 mm. 1 jasper small-stemmed point (recovered from bottom of level) 3 fire-cracked rock fragments
195i	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 4, 70 to 95 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 large piece of a grinding stone
195m	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 5, 95 to 115 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	No artifacts
198	Ford Farm Prehistoric Site K-6451 7K-C-386	Artifact found in dirt bike track by Daniel Griffith, 4/3/92	1 crude quartz biface

REGISTER OF THE WILLIAM MORRIS CARNEY SITE

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
196	William Morris Carney house site 7K C 408	Topsoil level of test 1, a meter-square unit in the kitchen area of the former William Morris Carney toft site. SaB	clam shells asbestos siding 1 piece clear window glass 1 sherd refined white earthenware
197	William Morris Carney house site 7K C 408	Topsoil level of test 2, a meter-square unit in the kitchen area of the former William Morris Carney toft site. SaB	clam shells asbestos siding sherds representing about one third of an undecorated ironstone dinner plate marked "Mellor." sherds representing about one half of an undecorated refined white earthenware dinner plate. sherds representing about one half of a refined white earthenware dinner plate decorated with underglaze flower pattern and overglaze gilt decoration, marked "Salem China Co. Ohio" refined white earthenware teacup handle 2 sherds black-printed white refined earthenware sherds representing part of the bottom of a transfer-printed white earthenware saucer. dark brown glazed red earthenware 3 sherds clear vessel glass 6 sherds clear window glass base of a free-blown cloudy white glass vessel milk glass lid liner aluminum tab top nails pieces of a cast-iron object

APPENDIX 1: SOIL CHEMISTRY, WILLIAMS SITE

This is a partial listing of the analyses provided by the University of Delaware soil laboratory

Meters along cut	pH subsoil	pH topsoil	P subsoil (mg/dm3)	P topsoil (mg/dm3)	K subsoil (mg/kg)	K topsoil (mg/kg)	Mg subsoil (mg/dm3)	Mg topsoil (mg/dm3)	Ca subsoil (mg/kg)	Ca topsoil (mg/kg)	Mn subsoil (mg/kg)	Mn topsoil (mg/kg)	Zn subsoil (lb/a)
1	7.3	6	4	32	51	158	121	131	328	432	15.1	20.9	0.9
2	7.2	6.9	3	20	43	140	121	151	312	488	16.1	13.2	0.8
3	7.4	6.9	2	23	41	165	115	166	304	544	11.7	18.7	0.6
4	7.2	6.8	3	27	41	168	109	153	288	496	18.7	16	0.7
5	7.1	6.8	3	19	26	128	109	128	280	408	17.9	13.8	0.5
6	7.1	6.9	3	18	40	113	105	137	280	448	9.8	9.4	0.6
7	7	6.5	2	21	46	153	112	155	288	520	12.6	17	0.8
8	7	6.7	2	19	51	115	110	122	280	416	15.1	10.7	0.7
9	6.9	6.7	3	17	49	146	96	133	248	464	7.4	12.2	0.8
10	6.9	6.3	2	20	53	191	93	146	240	504	8.1	14.7	0.7
11	6.9	6.2	2	20	59	183	116	139	304	504	15.1	13.8	0.6
12	6.8	6.5	9	16	50	111	101	118	264	416	6.8	9.9	0.9
13	6.7	6.5	3	13	35	114	88	102	240	376	5.8	8.9	0.7
14	6.7	5.9	2	23	50	146	89	115	232	448	9.6	15.8	0.6
15	6.6	5.4	2	24	48	141	96	117	264	456	20.7	16.8	0.7
16	7	5.5	2	18	49	143	101	105	256	416	11.1	11.9	0.7
17	6.7	5.9	3	14	49	139	101	110	296	416	19.9	11	0.9
18	6.8	5.8	2	17	39	164	1	105	272	392	6.9	11	0.7
19	6.6	5.6	3	20	51	161	96	107	288	408	12.5	11	0.8
20	6.2	5.8	3	11	55	100	73	92	272	352	7.5	8.7	0.8
21	6.2	5.7	2	23	46	178	62	111	224	424	5.2	11.8	0.6
22	6.5	5.5	3	16	44	185	76	96	248	392	6.8	11.5	0.8
23	6.3	5.5	3	14	41	123	62	94	200	368	5.7	8.1	0.7
24	6.2	5.1	2	15	41	118	59	89	192	360	4.9	8.7	0.6
25	6.3	5.4	2	14	43	120	61	94	192	376	44.3	10.1	0.6
26	6.2	5.2	2	15	38	143	61	101	200	400	7.2	12.4	0.8
27	6.3	5.4	2	18	41	155	63	104	192	392	10.9	13.8	0.6
28	6.4	5.7	3	11	43	89	73	92	208	352	8	9.9	0.7
29	6.6	5.6	3	17	48	133	85	96	248	336	17.5	11.4	0.8
30	6.7	5.7	2	12	29	85	87	90	232	344	18.5	8.9	0.6
31	6.6	5.5	3	14	49	98	76	99	208	384	18.4	15.2	0.7
32	6.6	5.7	4	17	48	143	83	104	240	384	8.2	9.8	1.1
33	6.4	5.9	3	13	46	101	76	99	216	376	13.2	15.6	0.8
34	6.4	5.8	2	14	41	109	60	100	184	376	10.5	12	1.2
35	6.4	5.9	3	17	44	106	81	98	240	376	14.3	10.6	0.6
36	6.4	5.9	2	14	53	119	81	87	224	328	17.3	8	0.6
37	6.3	5.8	2	18	48	136	87	106	264	400	16.9	11.8	0.9
38	6.4	5.7	2	16	46	105	88	88	240	336	17.2	8.2	0.8
39	6.6	5.6	2	19	48	136	104	101	288	360	29.7	10.5	0.9

Meters along cut	pH subsoil	pH topsoil	P subsoil (mg/dm ³)	P topsoil (mg/dm ³)	K subsoil (mg/kg)	K topsoil (mg/kg)	Mg subsoil (mg/dm ³)	Mg topsoil (mg/dm ³)	Ca subsoil (mg/kg)	Ca topsoil (mg/kg)	Mn subsoil (mg/kg)	Mn topsoil (mg/kg)	Zn subsoil (lb/a)
40	6.7	5.9	2	17	39	135	113	90	304	336	19.9	10.3	0.6
41	6.6	5.8	1	15	38	105	123	93	320	328	9.3	8.9	0.5
42	6.6	5.6	2	20	46	125	122	99	288	360	17.2	12.5	0.5
43	6.7	5.6	1	11	36	68	127	87	320	328	8.4	8.9	0.5
44	6.8	5.9	2	11	41	84	128	94	296	344	13.3	8.8	0.6
45	6.7	5.7	2	14	36	125	120	95	288	336	12.2	11	0.6
46	6.7	5.8	2	13	40	81	110	90	264	328	11.1	7.2	0.6
47	6.6	5.6	2	12	53	95	123	84	280	320	14.6	8	0.6
48	6.5	5.9	2	10	44	69	99	92	248	336	17.3	9.7	0.7
49	6.5	6	2	17	48	121	106	92	296	320	7.7	9.3	0.6
50	6.4	6	2	15	40	119	78	95	200	344	16.2	13.3	0.5
51	6.7	6.1	2	12	38	103	81	104	200	352	8.5	13.5	0.5
52	6.5	6	2	13	36	100	117	98	280	328	15.3	9.6	0.6
53	6.7	6	2	13	54	95	135	95	328	336	35.4	9.6	1.2
54	6.4	6.2	2	11	51	100	150	105	376	360	10	11.7	0.7
55	6.7	5.9	2	17	36	100	120	106	368	368	21.6	13.4	0.6
56	6.7	5.9	2	5	31	60	102	92	280	328	14	10.7	1.1
57	6.9	5.8	2	11	29	63	113	92	296	328	7.7	11.1	0.6
58	6.8	5.9	2	17	40	90	123	106	320	384	13.3	12.9	0.7
59	6.8	5.9	2	15	30	85	90	102	272	368	12	13.3	0.8
60	6.9	5.7	2	20	29	91	76	105	216	392	12.8	13.2	0.8
61	6.9	6	2	11	26	75	94	93	264	344	16.1	9.7	5.8
62	7	5.7	2	18	28	103	120	90	320	352	31.3	29.3	0.8
63	6.8	6.3	2	11	26	69	120	110	312	384	25.2	9.8	0.8
64	6.8	6.1	2	13	34	85	118	107	312	376	38.8	14.9	0.6
65	6.9	5.3	1	20	25	98	122	113	320	392	17.6	16	1
66	6.9	6.1	2	11	23	81	104	98	296	352	35.3	12.6	1.5
67	6.7	5.9	2	14	31	95	139	95	360	352	24.5	11.3	0.5
68	6.7	6.2	1	9	38	63	123	98	320	352	14.5	11.1	0.6
69	6.9	6.1	1	13	26	78	128	96	344	344	15.2	15	0.8
70	6.9	6.2	1	13	29	96	124	106	320	376	24.3	12	0.9
71	6.5	6.2	1	8	45	84	126	93	312	328	18.9	9.2	0.5
72	6.7	6.2	2	12	35	38	112	100	288	344	23.4	9.7	0.9
73	6.8	5.8	4	15	30	91	89	102	248	368	21.4	11.8	0.6
74	6.8	6.2	2	11	38	80	104	88	280	312	11.1	9.3	0.9
75	6.7	5.7	3	17	46	100	94	100	256	360	24	12	4.1
76	6.9	5.9	2	13	36	86	102	99	264	352	16.4	14.1	1.1
77	6.8	5.9	2	14	38	100		110	312	352		11.9	0.8

APPENDIX 2: SOIL PROFILES, FORD FARM SITE

Profile descriptions of soils occurring at the Ford Farm Site

Prepared by John Foss

Horizon	Depth cm	Color	Mottles	Text	Struct	Consist	Bound
Profile S92DE1 Site 193							
Ap1	0-9	10YR 3/2,5/3	None	ls	lmgr	vfr	as
Ap2	9-19	10YR 5/3,5/4 some 3/3	None	ls	lmpl	vfr	cs
E	19-32	10YR 5/4	None	ls	lfsbk	vfr	cs
Bw1	32-53	7.5YR 4/4	None	sl	lmsbk	vfr	gs
Bw2	53-83	7.5YR 4/4	None	sl	lmsbk	vfr	gs
2Btb	83-110	7.5YR 4/4,3/4	None	sl	lmsbk	fr	-
3Ab	110-127	10YR 3/3,3/4	None	ls	-	-	-
3B/C	127-145	10YR 5/4,6/6	None	ls	-	-	-
		7.5YR 4/6 lamellae		sl	-	-	-
3B/C	145-160	10YR 6/4	None	ls	-	-	-
		7.5YR 4/6 lamellae		sl	-	-	-
3B/C	160-190	Similar to horizon above					
3C	190-225	10YR 6/6	None	ls	-	-	-
		10YR 5/6 few lamellae					
3C	225-240	10YR 6/6	clf	ls-s	-	-	-
		10YR 5/8					

Notes: Some clay bridging in 2Btb horizon; auger used to describe profile from 110-240 cm; the Bw horizon had minimal weathering with some evidence of iron translocation; buried Ab horizon at 110-127 cm was quite evident.

S92DE2 No. 195

Ap	0-30	10YR 4/3,3/2	None	ls	lmpl	vfr	as
E	30-52	10YR 5/6	None	ls	lmpl	vfr	cs
Bw1	52-82	10YR 4/6,5/6	None	ls	lmsbl	vfr	gs
Bw2	82-115	7.5YR 5/6,4/6	None	ls,sl	lmsbk	vfr	-
2B/C	115-170	10YR 5/6,6/6	None	ls	-	-	-
		7.5YR 5/6 lamellae		sl	-	-	-
3Bt1b	170-190	7.5YR 5/6,5/8	None	sl	-	-	-
3Bt2b	190-210	7.5YR 5/6,5/8	m2d	sl	-	-	-
		10YR 6/2					
		5YR 4/6					
3Bt3b	210-230	7.5YR 4/6	m2d	scf	-	-	-
		5YR 4/6					
		10YR 6/2					
4Bt4b	230-250	10R 4/4	None	c	-	-	-

Notes: Auger used to describe soil below 115 cm; very old soil at base (>100,000 YBP); the 3Bt horizon was well developed, probably a Pleistocene soil.

S920E3 No. 192

Ap	0-27	10YR 3/3	None	sl	1fp1	vfr	as
EB	27-45	10YR 4/4,5/4	None	sl	1msbk	vfr	cs
Bt1	45-65	7.5YR 4/6	None	sc1	1-2msbk	fr	-
Bt2	65-85	7.5YR 5/6,4/6	None	sc1	-	-	-
2Bt3b	85-115	10YR 5/6	None	cl	-	-	-
3BC	115-125	7.5YR 5/6,4/6	None	ls	-	-	-
2C	125-135	10YR 6/6	None	ls	-	-	-

Notes: Auger used for description below 65 cm; the Bt horizon was an argillic with moderate development.

S920E4 No. 191

Ap	0-24	10YR 3/3	None	sl	1fp1	vfr	as
EB	24-40	10YR 5/4	None	sl	1msbk	vfr	cs
Bt1	40-95	7.5YR 4/6	None	sc1	-	fr	cs
BC	95-120	7.5YR 4/6	None	sl	-	fr	cs
C	120-130	7.5YR 5/6	None	ls	-	-	-

Notes: This profile is similar to No.192

S920E5 No. 190

Ap	0-20	10YR 4/3	None	sl	-	-	-
Bw	20-60	7.5YR 5/6,5/4	None	sl	-	-	-
2B/C	60-85	10YR 6/6	None	ls	-	-	-
		7.5YR 4/6 lamellae		sl			
2B/C	85-100	10YR 6/6	None	ls	-	-	-
		7.5YR 5/6,5/8 lamellae		sl			
2C	100-195	10YR 6/4	None	s (med)	-	-	-

Notes: Lamellae developed from 60 to 100 cm; auger used to describe profile below 60 cm

S920E6 No. 194

Ap	0-20	10YR 3/1	None	sil	-	-	-
C	20-45	10YR 5/4	None	sil	-	-	-
C	45-145	10YR 5/6	m2d	sil	-	-	-
		7.5YR 5/8					
		10YR 6/2					
2Btb	150-160	10YR 4/4	m2d	sil-cl	-	-	-
		7.5YR 5/8					
		10YR 6/2					
3BC	160-172	10YR 5/4-5/6	-	sl	-	-	-

Notes: Area appears to be ponded with recent sediment occurring in top 145 cm.

APPENDIX 3: PROPERTY DESCENTS

FRAZIER CARNEY HOUSE SITE
K-6692

Nora Carney Morgan, formerly Nora D.
Carney, widow of Frazier R. Carney,

and

Edna Grigsby and Leonard Grigsby her
husband, Norma Greenage and Paul
Greenage her husband, Agnes Carney and
Goldie Carney her husband, Ethel Mayland
and Harold Mayland her husband, and
George Carney and Lucy his wife

to

Myra McIlvaine of Magnolia

April 27, 1956, Deeds F21, page 213

22 acres, same lands, among others, which
Frazier Carney died siesed

Myra McIlvaine, widow
to

George Carney and wife

May 24, 1956, Deeds F21, page 215

22 acres adjoining Medford Ford, Lizzie
Morris, Frances Raughley and land late of
Frank McKee

Will of Frazier Carney

Dated April 21, 1945, Book C3, page 470

OUTSALE:

George Carney and Lucy R. his wife
to

Frank J. Ford and Phyllis Y. his wife

0.77 acre adjoins other land of Ford and
mentions land of REA express

WILLIAM MORRIS CARNEY TOFT
K-6691 (HOUSE) , 7K-C-408 (SITE)

Jacob Mosley

to

Isaac Mosley

October 4, 1884 Deeds Q6 page 96

10 acres bounded on the north by other land
of Jacob Mosley about to be conveyed to
Robert Carney, on the east by the road, on
the west by the Cubbage property, and on the
south by the Reville land.

Isaac Mosley and wife

to

Sallie Carney

January 10, 1885, Deeds Q6 page 239

5 acres bounded on the south by other land of
Isaac Mosley, on the heirs of Ann Cubbage,
and on the north by land of Robert Carney.

Will of William Morris Carney

Probate May 7, 1926

Attached inventory includes 30.5 acres on
"Silver" Road, East Dover Hundred, joining
land of W. H. Carney and W. H. McKee.
Also a half interest in 19.75 acres in West
Dover Hundred on the road from Moore's
Corner to Dinah's Corner.

Lizzie Morris, daughter, was to receive the
southeast five acres of woodland purchased
from the Cannon estate and the north seven
acres of the farm. Mentions his wife's land.

Will of Sallie E. Carney

Probated September 1, 1949

Left all her household goods to daughter Elizabeth, wife of Carlos Morris. Son Frazier Carney was to receive livestock and farm equipment.

Thomas G. Hughes III, Trustee
to
Nolan G. Morris

Vendue held December 10, 1966
March 28, 1967, Deeds S-24, p. 74

7 acres

Recites that on November 18, 1966, Orphans Court ordered sale of premises owned by Joseph B. Morris, Sarah Durham, Paul E. Morris, William C. Morris, Robert P. Morris, Martin J. Morris, Douglas F. Morris, Nolan G. Morris, Carla Elizabeth Jackson, and Lisa Frances Jackson.

Nolan G. Morris
to
Nolan G. Morris and Barbara M. Morris
As tenants by the entireties

May 2, 1967, Deeds R-24, p. 407

Nolan G. Morris and wife
to
Homer W. Minus and wife

November 29, 1968, Deeds R-24, p. 407

7 acres adjoining lands formerly of Williams and land formerly of Ray Frazier Carney

ROBERT CARNEY TRACT

Jacob Mosley
to
Robert Carney

October 4, 1884, Deeds R 6, page 219

5 acres, described as parcel 1 below

James M. Satterfield, trustee
to
Walter H. Carney

November 6, 1926, Deeds C 13, page 233

Parcel 1: 5 acres Parcel 2: 3 acres

Will of Walter H. Carney

Will Book W 3, page 304

Devised the land to his widow, Keturah, for life, and upon her death to Minous, Clara, Norman, Clifford and Nora. Keturah died in 1972.

Minous Carney and Elizabeth C. his wife and Clifford Corney and Florinda his wife, and Clara Gould and Ferdinand Gould her husband, and Norman V. Carney and Dorothy B. his wife, all of Bridgeton, New Jersey, and Elnora C. Pierce and Franklin Pierce her husband of Monroeville, New Jersey,
to

William T. Demby, single man

May 10, 1973, Deeds P 28, page 70

Parcel 1: 5 acres adjoining land now or formerly of Isaac Mosley, land now or formerly of the heirs of Ann Cubbage and other lands now or formerly of Jacob Mosley.

Parcel 2: 3 acres, adjoining land now or formerly of Ann Cubbage heirs, other land now or formerly of Jacob Mosley, lands now or formerly of William Denney, lands now or formerly of Sallie Carney, and lying on the new public road.

The two tracts constitute one farm

Note: these descriptions were very old in 1973. The property obviously had not been resurveyed in nearly 90 years.

OUTSALES:

William T. Demby
to
William T. Demby and Shirley his wife
as tenants by the entireties

May 9, 1974, Deeds F 29, page 535

One half acre bounded on the north by Bratcher and on other sides by other land of Demby

William T. Demby and Shirley T. his wife
to
Thomas V. Allen and Hettie O. his wife
September 14, 1976, Deeds X-30, page 524

1.8635 acre

William T. Demby and Shirley T. his wife
to
Rudolph E Brown II and Teedie R. his wife
January 24, 1977, Deeds E 31, page 524

1.5961 acres

William T. Demby and Shirley T. his wife
to
James F. Miller and Carrie M. his wife
November 22, 1976 Deeds B 31 page 531

1.6260 acres

MOSLEY - BRATCHER HOUSE
K-6690

Herbert Harmon and Mattie Ray his wife
of Bridgeton, New Jersey
to
Albert Bratcher and Emma his wife
February 2, 1950, Deeds T18, page 502

Number 1: 27 acres adjoining Clody and
Estella Pritchett, lands late of Elizabeth
Mosley, and lands now or formerly of
Watson Cramer, W. M. Carney, and Amanda
Carney, and lands of others, which David
and Lucinda Mosley granted to Harmon in
1919.

Number 2: 18 acres 7 square perches
adjoining lands now or formerly of Eugene
duPont, Frank McKee, and others, which
Charles and Adaline Sheffer granted to
Harmon in 1939.

DESCENT OF PARCEL 1:

David W. Mosley and Lucinda his wife
of Duck Creek Hundred
to
Herbert Harmon and Mattie Ray his wife
of the City of Philadelphia

October 11, 1919, Deeds P 11, page 223

27 acres, cites purchases from Joseph
Billings, Jacob Mosley, George Jones and
Florence N. Creadick

BILLINGS PART OF PARCEL 1:

Jacob Mosley and Emma his wife
to
William H. Waters
April 16, 1892, Deeds L 7 page 321

William H. Waters and Julia Ann his wife
to
Joseph H. Billings of Philadelphia
January 7, 1893, Deeds L 7 page 323

Joseph A. Billings and Martha M. his wife
of Philadelphia
to
Lucinda Mosley

September 22, 1896, Deeds V 7 page 292

1.25 acres adjoining other land of Lucinda
Mosley west of the road

JACOB TO LUCINDA PART OF PARCEL 1

Jacob Mosley and Emma his wife
to
Lucinda Mosley

June 7, 1888, Deeds A 7, page 182

3 acres adjoining Robert Carney, Dr. Samuel
Creadick, other lands of Jacob Mosley

JONES PART OF PARCEL 1:

Jacob Mosley and Emma his wife
to
George M. Jones

June 10, 1902, Deeds Q8, page 47

16 acre farm, all the land conveyed to Mosley
from Samuel P. Mifflin and William Denney
except parcels already conveyed to others.

George M. Jones and Bessie his wife
to
David W. Mosley and Lucinda his wife

June 16, 1902, Deeds Q8, page 89

16 acre farm on the west side of the road adjoining David and Lucinda Mosley, Levi H. Mosley, Martha Johnson, Annie Geiser and others.

CREADICK PART OF PARCEL 1:

Benjamin Hamm
to
Hettie A. Rash

April 25, 1883, Deeds L 6 page 188

19 acres adjoining Geiser, DuHamel, McColley and others.
Pennel Rash and Hettie his wife
to
Dr. Samuel Creadick of Dover

January 21, 1884, Deeds O9, page 124

19 acres of woodland

Florence N. Creadick,
executrix of Samuel Creadick of Philadelphia
to
David Mosley

October 5, 1900, Deeds K 8 page 38

19 acres of woodland adjoining Geiser, DuHamel and McColley

DESCENT OF PARCEL 2:

Henry S. Hamm and Nina V. his wife
and Natalie R. Hamm, Widow of Benjamin
to
Charles W. Sheffer of Dover

May 9, 1939, Deeds O 15, page 99

Charles W. Sheffer and Adaline his wife
to
Herbert Harmon and Mattie Ray his wife
of Newark, Essex County, New Jersey

October 14, 1939, Deeds O 15, page 469

18 acres and 7 square perches purchased of Hamm

Will of Benjamin Hamm

December 14, 1929, Will book R 2 page 38

Will of Eliza P. Clark

April 13, 1910, book G 2, page 374

THE ORIGINAL MOSLEY TRACT:

William Denney
to
Jacob Mosley

27 September 1884, Deeds R 6, page 33

3.75 acres west of the new road, part of exchange to square the property line with the road.

Samuel Pleasanton Mifflin
and Martha his wife
to
Jacob Mosley

February 18, 1884, Deeds P6 page 26

36 acres and 106 perches adjoining land formerly of Eldad Lore and of John Reed near the corner of the Nathan Williams lot.

LEON CARNEY HOUSE

K-1060

(For earlier conveyances see above property.)

David W. Mosley and Lucinda his wife
to
Clody Pritchett and Estella his wife

October 20, 1910, Deeds Y 9 page 322

13 acres, being part of land conveyed by George M. Jones and wife and by Florence Creadick, executrix.

Clody Pritchett and Estella his wife
to
First National Bank of Dover

December 7, 1938, Deeds K 15, page 422

First National Bank of Dover
to
Leon Carney and Mildred C. his wife

March 18, 1939, Deeds N 15, page 33

13 acres, adjoining Walter Carney, other
lands of David Mosley, Mrs. Williams,
George M. Jones, and Levi Mosley

OUTSALES:

Leon Carney and Mildred his wife
to
Floyd L. Corney and Beatrice M. his wife

April 30, 1956, Deeds F 21, page 58

7,300 square feet on the west side of the road
bounded by Paul R. Smith, formerly of
Walter Carney, and by other lands of Leon
Carney.

MARTHA JOHNSON LOT

K-1059

Jacob Mosley
to
Martha Johnson, wife of Burton Johnson

August 15, 1884, Deeds S6, page 405

One half acre triangle, bounded by lands of
Jacob Mosley and Lewis Geiser, and the
road.

Martha Johnson, widow
to
Walter H. Carney

August 13, 1906, Deeds F9, page 419

One half acre

Walter H. Carney, widower
to
Frank Hall Pritchett

January 13, 1937, Deeds Z-14, page 204

One half acre adjoining Levi Mosley

Frank Hall Pritchett and wife
to
Paul R. Smith

September 6, 1955, Deeds C21, page 183

Half acre adjoining lands now or formerly of
Leon Carney and lands now or formerly of
Showell, containing a frame dwelling house,
detached garage, and outbuildings.

LEVI MOSLEY PROPERTY
K-6689

Margaret Stuart of Wilmington
to
Walter Cummins of Wilmington

December 29, 1877, Deeds X-5, page 330

Parcel IV in a deed of trust to Clayton
Cowgill, cites November 13, 1877 deed of
Benjamin Blackiston, sheriff.

Walter Cummins of Wilmington
to
Catherine Miller, wife of Alexander Miller, of
Dover

September 23, 1878, Deeds Z5, page 185

Parcel IV in a deed of trust to Clayton
Cowgill

Alexander H. Miller and Catherine, his wife,
of Allentown, Pennsylvania
to
Lewis Geiser

March 6, 1880, Deeds D6, page 20

213 acres, 12 square perches between the
land of Mrs. Ann duPont, known as Fox
Hall and Virgin's Choice, land formerly of
John Pleasanton, deceased, and the main
branch of Dover River.

Lewis Geiser and Anna his wife
to
Levi H. Mosley

October 31, 1896, Deeds X7, page 7

5 acres adjoining Jacob Mosley and Burton
Johnson, the road, and Geiser's other land.

Lewis Geiser and Anna his wife
 to
 Levi H. Mosley
 February 2, 1901, Deeds L8, page 86
 2 acres adjoining other land of Levi Mosley
 and Lewis Geiser and the road.

 Lewis Geiser and Anna his wife
 to
 Levi H. Mosley
 May 12, 1903, Deeds T-8, page 146
 5 acres adjoining the road and property earlier
 conveyed.

 Elizabeth Mosley, widow
 to
 Watson Cramer
 November 20, 1915, Deeds X10, page 253
 12 acres, composed of 3 adjoining parcels
 bought from Geiser, cites a sheriff deed 12
 July 1912, book G10, page 367

 Watson Cramer and Elenora his wife
 to
 William H. Morgan
 July 19, 1922, Deeds F12, page 261
 12 acres bought of Elizabeth Mosley.

 William H. Morgan and Cora his wife
 to
 Wilbert Sherman and Margaret his wife
 of Port Penn
 June 16, 1941, Deeds Z-15, page 41
 12 acres adjoining Willim H. Morgan, Morris
 Simon, Clody Pritchett and others

 Wilbert Sherman and Margaret his wife
 to
 Charles Showell and Ethel his wife
 of Pennsylvania
 December 9, 1944, Deeds S16, page 338
 12 acres

OUTSALES:

 Charles Showell and Ethel his wife
 to
 Lloyd K. Corney and Sadie Mae his wife
 May 5, 1959, Deeds B22, page 257
 8,943 square feet adjoining the land of
 Reynolds Reed

 Charles Showell and Ethel his wife
 to
 James F. Marshall and Mary his wife
 March 9, 1962, Deeds W22, page 237
 13,668 square feet, adjoining the Paul Smith
 tract on the south.

 Charles Showell and Ethel his wife
 to
 Winfield Cannon and D. Louise his wife
 April 6, 1962, Deeds W22, page 171
 13,400 square feet out of the 12 acres

 DELAWARE TECHNICAL
 AND COMMUNITY COLLEGE
 TERRY CAMPUS

 144.9 ACRES

 Jacob Zimmerman and Charlotte Zimmerman
 his wife
 to
 State of Delaware
 August 16, 1971 Deed Book G-27, page
 185.

 151 acres, excepting a parcel sold to Trailer
 Village, Inc., and subject to a right-of-way to
 John C. Witcher.

 Jacob Zimmerman, Inc.
 to
 Jacob Zimmerman,
 April 30, 1953 Deed Book N-16, page 219.

Tract that Frank D. Wright and Mary E. Wright his wife conveyed to Jacob Zimmerman, Inc.

Frank D. Wright and Mary E. Wright his
wife
to
Jacob Zimmerman, Inc.

January 1, 1944 Deed Book N-16, page 219

On Fork Branch and the slag road opposite Denney's Corner, bounded on the east by the southbound highway; north by Fork Branch and the slag road; west by a continuation of the slag road and a small stream known as Dover River, separating this from lands of Charles T. Jackson, also by White Marsh Ditch separating this from lands of Annie and Mary Leonard, also by lands of Robert and Margaret Bounds; south by land of Lewis Leonard

Walter P. Moore and Mary Moore his wife,
Mabel A. Warrington and Irving Warrington
her husband, and J. Denney Moore and Mary
Moore his wife
to
Frank D. Wright.
December 15, 1936.

Estate of Allie P. Moore

July 6, 1936

Allie P. Moore died, leaving three children:
Walter P. Moore, J. Denney Moore, and
Mabel Warrington, as well as a grand-
daughter, Gladys P. Nissen, daughter of
Annie Moore Nissen, deceased.

Estate of John P. M. Denney

July 21, 1890 [probate date]

John P. M. Denney died testate, leaving the subject property to his daughter Allie P. Moore, wife of Joseph Moore. "My farm which I purchased of Charles Denney ...situated at Denney's Cross Roads... also the farm adjoining the farm at Denney's Cross Roads on which I so long resided" for life and then to her children. Will Book X-1, page 136.

JOHN P. M. DENNEY HOME FARM:

Estate of James Denney

September 20, 1845 (Probate date)
Will Book R-1, page 359.

Letters of Administration on the estate of James Denney were issued to John P. M. Denney. Matilda M. Denney was one of the sureties.

Estate of Thomas Denney

Orphans Court Plot Book 1, page 31
Orphans Court Book K, pages 90, 91, 94

February 11, 1828: James Denney, eldest son of Thomas Denney, petitioned the court to grant him parcel "E" of the estate of Thomas Denney, containing 155 acres, part of Irons's Range

John Ganoe and Nancy Ganoe, of Easton,
Pennsylvania, two of the children of Lewis
Ganoe
to
Thomas Denney

May 15, 1824

158 acres 60 square perches that Lewis Ganoe had received by order of the Orphans Court in 1806. John and Nancy were each entitled to a one-quarter share of the farm.

Estate of John Ganoe

Orphans Court Book F, page 197

March 25, 1805: After John Ganoe died intestate and without issue, his property was surveyed and found to contain 90 acres cleared land, 24 acres of woodland, and three acres of meadow. The commissioners determined that it could not be subdivided. His brother Lewis became the owner of the property.

Emanuel Stout and Lavinia his wife
to
Lewis Gano

February 11, 1756, Deed Book O-1, page 319.

125 acres, in exchange for the farm where Gano had been living. This later was to be known as parcel "E" in the 1828 division of Thomas Denney's estate.

Stokeley Sturgis, John Clark, John Chance,
John West, Peter Stout, and Elizabeth Stout
to
Emanuel Stout

February 13, 1752, Deed Book O-1, page 139.

Their equal shares in the land Benjamin Stout bought from Nicholas Loockerman, William Shearman, and James Mullin, part of Range, and later to be known as parcel "E" in the 1828 division.

Estate of Benjamin Stout

March 16, 1741 Will Book I-1, page 31.

Letters of administration on the estate of Benjamin Stout issued to widow, Elizabeth Stout,

TORBERT PARTS OF CONCORD AND RANGE:

Charles Denney and Mary S. Denney his
wife
to
John P. M. Denney

January 2, 1871, recorded 1936, Deed Book A-15, page 140

181 acres 67 square perches in Dover Hundred beginning at a stone on the west side of the Henry Wilson Road and adjoining land of John H. Hardison and Henry Wilson's land. Part of John Denney's estate, parcel "A" assigned to Charles Denney at the March term of Orphans Court 1868. Also a small tract of woodland on the branch near Campbell's tract, parcel "R" in John Denney's division.

Estate of John Denney

October 9, 1867, Orphans Court Book Z-1, page 280. Orphans Court Plot Book 4, page 61

Return of the partition of John Denney's land, "A farm or tract of land in Dover Hundred in Kent County and State of Delaware," 180 acres with a two-story frame dwelling house and other improvements, adjoining John P. M. Denney, Charles Brown, and John Hardestan.

Estate of Thomas Denney

February 11, 1828, Orphans Court Plot Book 1, page 31. Orphans Court Book K, pages 90, 91, and 94.

John Denney was assigned parcels "C" and "D" of the estate of Thomas Denney

John Torbert and Susan his wife
to
Thomas Denney of St. Jones Hundred

January 10, 1803, Deed Book G-2, page 271

Referring to the Act of Assembly February 2, 1793 to dock entails. A tract Hugh Torbert left to his son Peter, father of the grantor, by will dated December 28, 1757. Also 2 acres called the tanyard in the Range, conveyed to John Torbert by Hugh Torbert.

Hugh Torbert of Duck Creek Cross Roads
and Rhoda Torbert his wife
to
John Torbert shopkeeper of Camden

April 7, 1798 Deed Book F-2, page 67

Tract on the southwest side of the road from Dover to Duck Creek Cross Roads at the head of the hundred which the Hugh Torbert, grandfather of the grantor, left to John, father of this Hugh, in tail.

Estate of Hugh Torbert

July 21, 1760 [probate date] Will Book K-1, page 233-234.

Will of Hugh Torbert of St. Jones Hundred, names three sons and three daughters. To John Torbert, a parcel late of John Housman called Concord on the upper side of the King's Road, and two acres of [Irons] Range, except 6 acres given to his son Peter in tail. To Peter Torbert, 100 acres of Range

except ten acres where the tanyard stands, and the remainder of Concord [the 6 acres]. To Simon a parcel in Duck Creek, Islington, bought from Simon Vanwinkle.

John Housman of Dover
to
Hugh Torbert, tanner

April 11, 1750 Deed Book O-1, page 45

2 parcels lying on the north side of Dover River in Dover Hundred. First parcel, 252 acres on the north side of the main branch of Dover River and on both sides of the King's Road from New Castle to Dover, part of Concord, confirmed to Simon Hirons February 25, 1691. Second parcel 100 acres on the north side of the main branch of Dover River, and joining the first parcel, part of Range, later to be known as parcel "C" of the 1828 Denney division.

THE ORIGINAL CONCORD TRACT:

Grant to Simon Hirons

February 25, 1691 Deed Book O-1, page 45

Concord tract, 670 acres, was confirmed to Simon Hirons.

THE ORIGINAL RANGE TRACT:

Grant to Simon Hirons

Fifth Month, 39th, 1688 Deed Book O-1, page 319

Simon Hirons received a patent for 1000 acres called the Range on the north side of Dover River. Deed Book O-1, page 319.

Survey of 1,000 acres

Ninth Month, 12th, 1686 Deed Book O-1, page 319

A thousand-acre tract was surveyed for Simon Hirons.

Warrant for Simon Hirons

Fourth Month, 20th, 1682 Deed Book O-1 page 319

Simon Hirons, an old renter, received a warrant to lay out a thousand-acre tract.

FORD FARM

175.75 ACRES

Estate of Florence E. Ford
to
Anita F. Baynard and Marian F. Smith

February 16, 1982, Deed Book U-36, page 95

Lying on both sides of the Delaware Railroad and on the east side of McKee Road, adjoining lands of William H. McKee, land formerly of David W. Moseley, land of John B. Aiken, and others, excepting five acres conveyed to Ralph C. Baynard and Florence Anita Baynard his wife

Estate of Florence Ford

December 11, 1979: Florence E. Ford died intestate, leaving daughters, Anita F. Baynard and Marian F. Smith.

Estate of Medford Ford

October 5, 1973: Medford B. Ford died, leaving the property to Florence E. Ford his wife.

Ella Scotten, widow
to
Medford B. Ford and Florence E. Ford his wife.

April 24, 1936, Deed Book U-14, page 320.

Nettie S. Moore, George Busch and Clara his wife, Walter Rash and Mary L. Rash his wife, Henry Busch and Sara Anna Busch his wife, Edward Dixon and Helen Dixon his wife, and Medford Ford and Florence E. Ford his wife

to
Ella Scotten, widow of Emory Scotten,
June 5, 1915 Deed Book V-10, page 118.

Six-sevenths interest in 175.75 acres on both sides of the Delaware Railroad adjoining William H. McKee, David Moseley, John B. Aiken, and others.

John B. Hutton, trustee for Amy E. Scotten,
minor
to
Ella Scotten, widow

June 5, 1915 Deed Book V-10, page 122.

One-seventh interest in 175.75 acres on both sides of the Delaware Railroad adjoining William H. McKee, David Moseley, John B. Aiken, and others.

William Denney and Annie D. Denney his
wife
to
Emory Scotten of Sussex County

December 24, 1888 Deed Book B-6, page 33. Deed Book B-7, page 311.

172 acres on both sides of the Delaware Railroad adjoining Henry Beville, Lewis Geiser, others, and the Shakespeare Mill Pond, Tract #3 on the return of the commissioners to partition the land of Mary P. DuHamel, except four acres conveyed to Jacob Moseley, now consisting of 172 acres. Also an adjacent tract adjoining Lewis Geiser, Samuel P. Mifflin and others, being 3.75 acres Jacob Moseley conveyed to William Denney September 24, 1884.

Jacob Moseley of Little Creek Hundred
to
William Denney of Dover,

September 24, 1884 Deed Book R-6, page 33.

Triangular tract on the northeast side of the new public road from Henry N. S. Reville's farmhouse to William McKee's dwelling, adjoining other land of Moseley, land of Lewis Geiser, and land of William Denney, containing 3.75 acres.

William Denney
to
Jacob Moseley

September 24, 1884, Deed Book R-6, page 35

A triangular tract on the west side of the new public road from Henry N. S. Reville's farmhouse to William McKee's dwelling, adjoining other land of Moseley, land of Henry N. S. Reville, and land of William Denney, containing 4 acres, 18 perches.

Estate of Mary DuHamel
to
William Denney

Chancery Partition Docket F, page 442;
Orphans Court Plot Book 4, page 247

July 25, 1882: William Denney bought parcel #3 at public sale from the estate of Mary Pleasanton DuHamel. Annie D. Denney was a daughter of Mary Pleasanton DuHamel.

McKee Road

May 12, 1881: The Court laid out a road known as the McKee and Geiser Road to connect the present Denney Road with the present College Road. Court of General Quarter Sessions of the Peace and Gaol Delivery road book, pages 244- 248.

Estate of Mary DuHamel

December 14, 1877 [probate date] Will Book U-1, page 456.

Will of Mary Pleasanton DuHamel, widow of William DuHamel, July 15, 1875, with codicil June 23, 1877.

Estate of William DuHamel

April 9, 1867 [probate date] Will Book T-1, page 352.

Will of William DuHamel, February 25, 1867.

Estate of John Pleasanton

March Term 1840 Chancery Partition Docket B, page 175. Orphans Court Plot Book 1826, page 290.

Order of the Chancery Court to divide a parcel identified as the eighth item in the will of John Pleasanton. Mary DuHamel was to receive part of the tract outright. The remainder had been left to Mary and other heirs as tenants in common. Her total share was to be 136 acres 86 square perches, except the lot lately in the tenure of Nathan Williams, free Negro.

Estate of John Pleasanton

September 10, 1838 [probate date] Will Book R-1, pages 112, 118.

Will of John Pleasanton, July 14, 1838, mentions his three daughters and deceased son Samuel. The eighth tract, which had been bought of Thomas Davy, was to be granted in part to Mary DuHamel outright. The remainder had been left to Mary and other heirs as tenants in common, except the lot lately in the tenure of Nathan Williams, free Negro.

Thomas Davy
to
John Pleasanton

December 19, 1818, Deed Book J-2, page 251.

286 acres in Dover Hundred. Thomas Davy's wife, Elizabeth, had been a daughter of Vincent Loockerman the younger. This tract had been assigned to Elizabeth in the division of the estate of her sister, Susanna Stoops.

Estate of Susannah Stoops

May 11, 1804, Orphans Court Book F, page 137

Orphans Court ordered division of the land of Susannah Stoops, deceased, eldest daughter of Vincent Loockerman the younger, deceased. Elizabeth Loockerman was awarded 286 acres between Fox Hall Branch and the

main run of Dover River, beginning in the line of the tracts Virgin's Choice and Fox Hall. The property included a one-story weather boarded log dwelling, two or three old outbuildings in the tenure of Samuel Burkalow. [Note: Scharf states that Virgin's Choice and Fox Hall were two names for the same property, but this document clearly states that they were different tracts.]

Estate of Vincent Loockerman

January 25, 1796 Orphans Court Book E, page 235.

Commissioners issued a valuation of the rents of Susannah Loockerman, daughter of Vincent Loockerman the younger, deceased. The property included two farms: First, 100 acres cleared arable land with a dwelling house and sundry old outbuildings "very much wrecked" in the culture of William Farmer, Negro, adjoining the dwelling of Vincent Loockerman, deceased. Second, a farm near Fox Hall containing 50 acres cleared arable land with an old one-story house and twenty acres cleared land nearby.

Vincent Loockerman the elder
to
Vincent Loockerman the younger

February 12, 1782 Deed Book X-1, page 1.

Vincent Loockerman the elder granted his son Vincent several properties in which he had previously granted only a life estate. One of the properties was described as 500 acres beginning with Spring Branch of Dover River and bounded by the river and the land of Charles Ridgely [Fox Hall], then occupied by James Dunnifin, James Wilkison, Henry Collins, and Richard Brown.

Vincent Loockerman the elder
to
Vincent Loockerman the younger

November 1, 1773, Deed Book U-1, page 234.

Vincent Loockerman the elder granted to his son Vincent all his land in Dover Hundred for his natural life only.

APPENDIX 4: NATIONAL REGISTER NOMINATIONS

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1. Name of Property

historic name Medford Ford Farm
other names/site number Scotten-Ford Agricultural Complex, K-6694, K-6451, 7K-C-386

2. Location

street & number East side of McKee Rd. between College Rd. and Maidstone Br.
city or town Dover vicinity
state Delaware code DE county Kent code 001 zip code 19901

5. Classification

Ownership of Property	Category of Property	Number of Resources within Property		
private	district	Contributing	Noncontributing	
		12	3	buildings
		1	1	site
		13	4	total

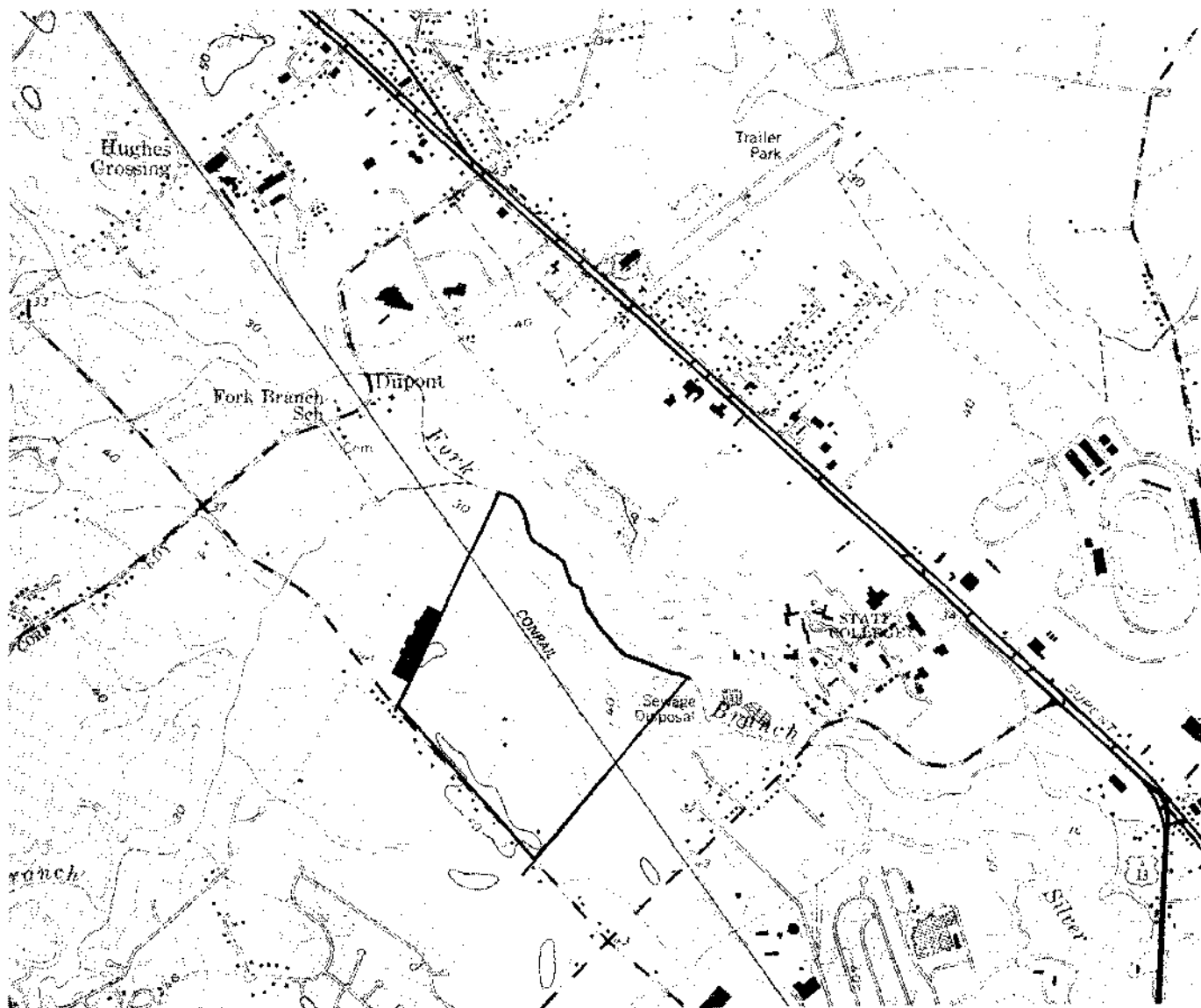
6. Function or Use

Historic Functions

AGRICULTURE/ agricultural field
AGRICULTURE/animal facility/henhouses
AGRICULTURE/ storage/granary, corncrib
AGRICULTURE/ animal facility/ paddock, stable
INDUSTRY/manufacturing facility/sawmill
DOMESTIC/single dwelling/mansion house

Current Functions

AGRICULTURE/ agricultural field
AGRICULTURE/storage
AGRICULTURE/animal facility/ paddock, stable
DOMESTIC/single dwelling/mansion house



Detail of USGS Dover 7.5 minute quadrangle



Location of the Scotten-Ford Toft

Site boundaries are marked with a solid line

7. Description

Architectural Classification

Other: Vernacular

Materials

foundation brick

walls board and batten, wood plank

roofs tin, asphalt, cedar shingle

Narrative Description:

At the core of the complex is a four-bay two-story frame farmhouse built around 1890. Contributing buildings include chicken houses, a barn, granaries, and sheds. In the woods is a sawmill site. The only non-contributing buildings on the property are a mobile home with attached garage, a steel storage shed, and a recent brick house. The nominated area includes the Nathan Williams site, which is being nominated separately.

The main line of the Delaware Rail Road, now Conrail, is the oldest element of the built environment; it is therefore a contributing part of the historic landscape that has little direct bearing on the history of the property as described here.

The sawmill complex, in the woods at the north end of the toft, consists of two sheds and the ruins of the mill. Mill ruins consist of timbers still in place, the main drive pulley still in place, and an excavated area where adjacent machinery was mounted. Steel parts lie on the ground nearby. Even though the mill machinery has been dismantled, all essential elements of the plant can be discerned from the ground plan of what remains. The integrity of the site is excellent from an industrial archaeological point of view.

Nearby is an accessory building with a tin gable roof and vertical plank siding. This building served as the equipment shed for the sawmill.

An equipment shed or garage, also with a metal-covered gable roof and vertical plank siding, stands nearby. It has been extended by a shed-roofed addition. One end of the building is open. Around this building lie pieces of farm machinery, indicating that this was a repair shop. In the woods behind lie the remains of mowing machines, combines, and other farm machines, from which most of the wooden parts have perished.

There are five frame chicken houses, all with tin roofs and board-and-batten wood siding.

The three oldest chicken houses, built around 1930, stand in a row south of the house. The smaller, northernmost, building is 12 by 10 feet, while the two larger ones are 12 by 16 feet. The newer chicken houses, built around 1940 north of the house, are larger. The smallest house, which apparently is the oldest has a shed roof, while the other four have gable roofs. Internal roosts and outdoor water faucets remain from the period when these houses were in use.

All are virtually unchanged from the days when they were in service. A granary adjacent to the larger chicken house is part of the poultry-production complex.

Between the chicken houses and the sawmill is a well-preserved cluster of buildings consisting of a corn crib, a barn, and a wagon shed, which are related to the livestock and cultivation functions.

The corn crib has a shingled gabled roof and ventilated wood sides typical of local corn cribs. It stands on brick piers. The barn has an asphalt-shingled gable roof with a shed-roofed addition. It is older than the cement-block first story on which it stands. According to the owner, her father removed and replaced the original first story. This building contains stalls for horses and is attached to a paddock. It has good integrity, despite the added ground floor that replaced a former brick foundation.

The frame equipment shed, with a metal gable roof, is open on one side. It has good integrity.

At the center of the chicken house group is a two-story, four-bay frame farmhouse with an asphalt-shingled gable roof. It has been covered with aluminum siding. A porch has been added to the front, a

chimney to the east end, and a kitchen to the rear (north) side. While the building is structurally well preserved, it has been much altered.

The group of buildings continues to function as an agricultural support facility. Soybeans, winter small grains, and corn are grown on the farm, and the machinery shed still is used to house farm machinery. The owners sometimes keep horses in the barn, and both the house and mobile home are occupied by the owners' families. One of the owners lives in a modern house on a separate lot, the only part of the original Scotten tract that is no longer part of the farm property.

The grounds immediately adjacent to the toft are extensively landscaped with mature plantings and covered with neatly-mowed lawns. Areas that formerly were bare ground, such as chicken yards, are no longer fenced and are covered by lawn. In spite of this landscape alteration, the outlines of former internal divisions of the farmyard can be discerned as subtle grade shifts and linear features on the surface and would undoubtedly appear in an archæological survey.

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1. Name of Property

historic name

other names/site number

Mosley Rural Archeological and Historic District
K-6689 K-1059 K-1060 K-6690 7K-C-408 K-6691 K-6692

2. Location

street & number

West side of McKee Rd. between College Rd. and Maidstone Br.

city or town

City of Dover

state Delaware

code DE

county Kent

code 001

zip code 19901

5. Classification

Ownership of Property

private

Category of Property

district

Number of Resources within Property

Contributing

7

3

10

Noncontributing

14

14

buildings
sites

total

6. Function or Use

Historic Functions

AGRICULTURE/ agricultural field

DOMESTIC/single dwelling

AGRICULTURE/ agricultural complex

Current Functions

AGRICULTURE/ agricultural field

DOMESTIC/single dwelling

AGRICULTURE/ agricultural complex

grade, for pallets, crates, dunnage, fences and other rough applications. Margins in these product lines are so low that large operators seldom engage in the rough lumber trade, which has by default fallen to the small operators, of whom Medford Ford was typical.

Ford's mill was abandoned and left in place until about thirty years ago when usable moving parts were salvaged for a reconstruction in Cheswold that is still standing. The site was left undisturbed as Ford's daughters turned the farm over to non-resident contract farmers who today use only the fields.

Aside from the removal of certain mill machinery and the rotting of wooden parts, the machinery shop and the sawmill industrial site remain intact, and capable of providing detailed information on the disposition of resources in such an installation. In terms of the discipline of industrial archaeology, therefore, the sawmill area is capable of revealing considerable information about the operation of a small farm-based sawmill.

The boundaries include the Nathan Williams site and the Ford Farm Prehistoric Site, which are discussed in separate nominations.

9. Major Bibliographical References

Ames, David L., Mary Helen Callahan, Bernard L. Herman, and Rebecca J. Siders
1989 *Delaware Comprehensive Historic Preservation Plan.*

Custer, Jay
1986 A management plan for Delaware's Prehistoric Cultural Resources. *University of Delaware Center for Archaeological Research Monograph No. 2.*

Heite, Edward F., and Cara Lee Blume
1992 *Archaeological and Historical Discoveries in Connection with Scarborough Road.* Delaware Department of Transportation Archaeology Series 91. Dover.

Herman, Bernard L., and Rebecca J. Siders
1986 *Delaware Comprehensive Historic Preservation Plan: Historic Contexts.*

10. Geographical Data

Acreage of Property: 175.75 (two parcels)

Verbal Boundary Description Two parcels, bounded on the northeast by St. Jones River and on the southwest by McKee Road, on the northwest of lands formerly of Lewis Geiser and on the southeast by lands formerly of Eldad Lore.

Kent County property tax tract numbers ED 67.00 - 01 -02 and ED 67.00 - 01 - 01

Boundary Justification

These two tracts contain all the land the present owners' grandfather bought in 1888, and which have constituted the family farm during the entire period of significance.

11. Form Prepared By

Edward F. Heite
Heite Consulting
P. O. Box 53,
Camden, DE 19934

December 1992
302-697-1789

8. Statement of Significance

Applicable National Register Criteria

A Property is associated with events that have made a significant contribution to the broad patterns of our history.

D Property has yielded, or is likely to yield, information important in prehistory or history.

Period of Significance
1888-1942

Areas of Significance

Agriculture

Industry

Other: Industrial Archaeology

Cultural Affiliation
Euro-American

Narrative Statement of Significance

The Scotten-Ford Toft is a well-preserved example of a Kent County farmstead of the early twentieth century, containing buildings that reflect the area's major agricultural products: lumber, chickens, field crops, and horses. A sawmill and equipment area contains significant remains that can provide valuable industrial archaeological information about the functioning of a country sawmill during the early twentieth century. Such mills often were used by Delaware farmers to process the hardwoods that are abundant in the high freshwater wetlands. While these mills were nominally portable, they usually were fastened to heavy timber foundations like the one surviving here.

Three generations of his family have owned and farmed this property since Emory Scotten bought it in 1888. When Scotten bought the former tenant farm, he built the present house and the first of the outbuildings, replacing the old farmstead that stood farther to the east. The barn and the residence date from this period. His son-in-law, Medford Ford, built the chicken houses and the sawmill. Since Ford's death in 1973, his widow and then his daughters have rented the fields to others. In the absence of a resident farmer, most of the buildings remain unused but preserved. Only three elements of the property are clearly recent: a mobile home with a garage, a steel storage shed, and a brick house.

The pattern of forests and fields has not changed substantially since it was mapped in 1882. The only major changes in land use and ground cover has been the clearing of the field that lies between the toft and McKee Road and the erection of a house on a new lot that has been set aside for one of the owners in the extreme south end of the property.

The poultry industry has been a central feature of Delaware's economy since 1923, when Mrs. Wilmer Steele introduced mass production of chickens. Her broiler house, now preserved at the Delaware Agricultural Museum, is similar to three small houses at the south end of the Scotten-Ford complex. Unlike the original broiler house and most of the other surviving early examples, these houses are on their original site.

In addition to its significance as part of the agricultural production system, the sawmill site is significant in the discipline of industrial archaeology because it can provide extensive information concerning the ground plan, internal organization, and production systems of a small farm sawmill.

Since farms in this part of Kent County contain large areas of poorly-drained hardwood forest, timber harvesting has always been an important industrial activity. Because most of the county's forests are upland hardwoods like the Scotten-Ford woodlot, the local sawmill products are outside the commercial mainstream.

During the eighteenth and nineteenth centuries, nearby water-powered sawmills were available to process the timber output; when portable power sources came available in the form of tractors, farmers began buying their own mills, like the one represented here.

Most high-quality framing and finish lumber sold through commercial channels during the past century has been western softwood. Hardwood, such as the Kent County forests produce, is sold as a much lower



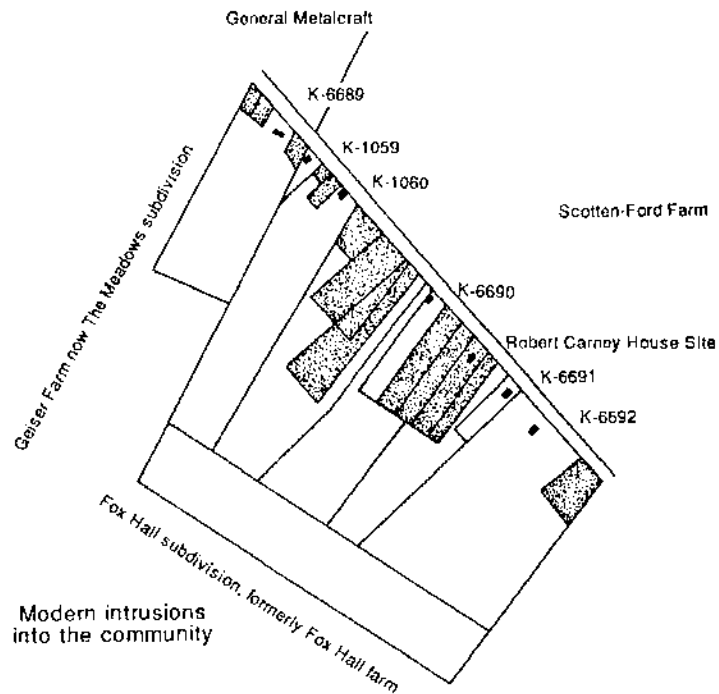
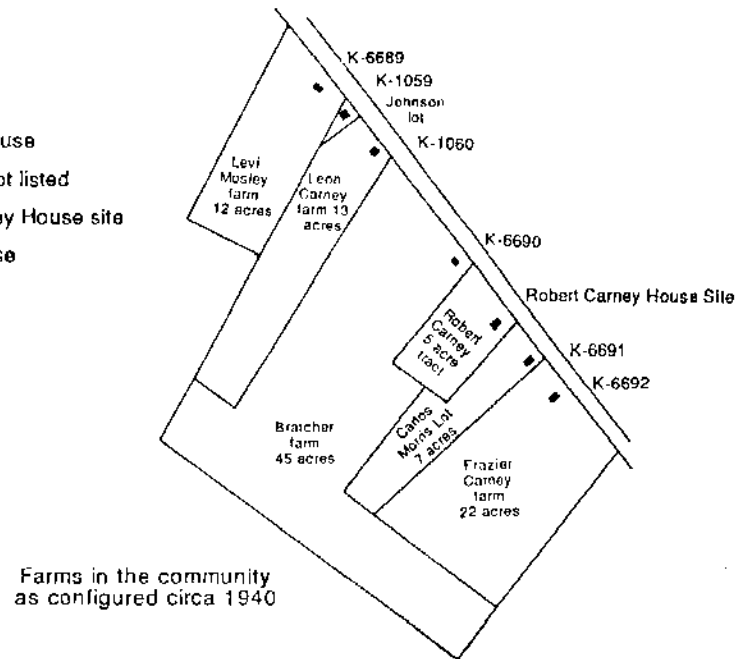
Detail of USGS Dover 7.5 minute quadrangle



Location of the Jacob Mosley Historic District

Site boundaries are marked with a solid line

K-6689: Levi Mosley House
 K-1059: Johnson lot
 K-1060: Leon Corney House
 K-6690: Mosley-Bratcher House
 Robert Carney House Site not listed
 K-6691: William Morris Carney House site
 K-6692: Frazier Carney House



Land use, infill, and contributing resources on the Mosley tract
 Source: county tax maps. Shading indicates non-contributing properties.

7. Description

Architectural Classification

Other: Vernacular

Materials

foundation brick piers
walls clapboarded wood, composition
roofs tin, asphalt, cedar shingle

Narrative Description:

The district is a contiguous group of related agricultural properties, about 95 acres, containing a significant concentration of agricultural fields historically linked through common development by members of a Native American remnant population during the last two decades of the nineteenth century. Two of the original houses survive in the district and the sites of four others are identified. Three agricultural outbuildings remain in place.

Most of the community's agricultural land, reclaimed a century ago from wetlands, remains undisturbed, even though recent suburban-type houses have been built along the eastern edge of the tract. Contributing properties are:

NAME OF PROPERTY	STATE SITE NUMBER	DESCRIPTION AND TAX MAP PARCEL	INTEGRITY	CLASSIFICATION
Site Frazier Carney House	K-6692	Site of 2-story frame house, barn, corncrib and privy ED 05 67.00 01 29	Fair	Buildings and Site
Site of the William Morris Carney House	7K-C-408	Site of a house moved to the Delaware Agricultural Museum grounds ED 05 67.00 01 27.01	Good	Site
William Morris Carney House	K-6691	House now at the museum <i>(not included in this nomination)</i>	Moved	Building
William Morris Carney fields		Agricultural fields ED 05 67.00 01 27.01	Good	Site
Site of the Robert Carney House		Site of a house known from documents and oral history ED 05 67.00 01 26	Unknown	Site
Site of the Mosley-Bratcher House	K-6690	2-story frame house ED 05 67.00 01 21	Fair	Site
Mosley-Bratcher fields		Agricultural fields ED 05 67.00 01 24, 24.01, 28	Good	Site
Leon Corney House	K-1060	2-story frame house ED 05 67.00 01 16	Good	Building
House currently on Martha Johnson Lot	K-1059	1-story old frame school, moved to the site more than 50 years ago ED 05 67.00 01 13	Good	Site and possibly building
Levi Mosley House	K-6689	2-story frame house ED 05 67.00 01 09	Good	building

FRAZIER CARNEY HOUSE SITE AND OUTBUILDINGS

The Frazier Carney House was a two-story clapboarded gable-roofed frame dwelling that stood on a knoll. The plan is L-shaped, with a porch across the front. The gable end presents a two-bay aspect to the road, but the house is three bays wide including the facade of the rear ell. Enclosed porches connect the main house to a separate kitchen. A barn, a cornercrib, a pumphouse, and a privy still stand.

FRAZIER CARNEY AGRICULTURAL FIELDS

WILLIAM MORRIS CARNEY AGRICULTURAL FIELDS

MOSLEY-BRATCHER AGRICULTURAL FIELDS

LEVI MOSLEY AGRICULTURAL FIELDS

Behind the houses along McKee Road are the fields formerly cultivated by the occupants of the houses. Some of the fields are now grown up in scrub hardwoods, and others have been enclosed in carefully maintained suburban lawns. Ditches, hedgerows, and even plowed furrows remain visible, even in the fallow ground and second growth.

WILLIAM MORRIS CARNEY HOUSE SITE

Yard trees, driveway, and minor landscape features still mark the site of the William Morris Carney house, which has been moved to the Delaware Agricultural Museum. Archæological tests confirmed existence of below-grade features and a very high probability that significant remains survive below grade. These tests consisted of two meter-square test pits in the house area.

ROBERT CARNEY HOUSE SITE

Shade trees mark the site of the Robert Carney House, now part of a suburban lawn. The site has not been archæologically tested, but the historic garden area has not been built upon.

Non-Contributing Properties on the Robert Carney Tract, built since 1976

JAMES F. MILLER HOUSE, a split-level brick and frame house

RUDOLPH E. BROWN II HOUSE, a two-story Tudor-style brick and frame house

THOMAS V. ALLEN HOUSE, a one-story brick and frame raised bungalow

WILLIAM T. DEMBY HOUSE, a frame rancher.

MOSLEY-BRATCHER HOUSE SITE

This two-story, two-bay, gable-roofed frame house was covered with a combination of imitation clapboard siding and asbestos shingles. An enclosed porch on the north and west sides connected the house to the kitchen. Open porches survived on the east and south. A shed-roofed addition was attached to the rear of the L-shaped main house.

Non-Contributing Properties on the Mosley-Bratcher Tract,

NEW CHURCH, a frame modular building and an adjacent house.

OLDER CHURCH, a frame building.

BRICK HOUSE, a brick rancher

LEON CORNEY HOUSE

This two-story, two-bay, gable-roofed frame house is now covered with asphalt imitation stone siding. Open porches survive on the south and east. Enclosed porches on the north and west connect the house to the kitchen.

Non-Contributing Properties on the Leon Corney Tract,

LONEE CORNEY MOBILE HOME on a one-third acre tract conveyed by the father of the owner.

FLOYD CORNEY HOUSE, rancher on 7,300 square foot lot conveyed by father of the owner.

MARTHA JOHNSON LOT

A one-story frame house with its gable facing the road was originally built as a schoolhouse. It was moved to the site, and served as a dwelling here during the period of significance. It is currently covered with vinyl siding.

LEVI MOSLEY HOUSE

The Levi Mosley House is a two-story frame house covered with asbestos shingles. The original gable-roofed house has been extended to the front with a hip-roofed wing, to which an enclosed porch subsequently has been added. It is the only occupied building among the contributing resources.

Non-Contributing Properties on the Levi Mosley Tract,

MARSHALL HOUSE, frame rancher on a lot containing 13,668 square feet.

CANNON HOUSE, frame rancher on a lot containing 13,440 square feet.

WILTBANK HOUSE, frame rancher on a lot containing 8,943 square feet.

8. Statement of Significance

Applicable National Register Criteria

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Period of Significance
1884-1942

Areas of Significance

Agriculture
Ethnic Heritage/Native American
Archaeology/Historic - Aboriginal

Cultural Affiliation
Acculturated Native American

Narrative Statement of Significance

Beginning in 1884, a group of families of Native American ancestry, locally known as moors, established a community when they bought poorly-drained scrub woodland from absentee landlords whose families had neglected it for generations. They installed drainage, built houses, and farmed the property for two or three generations until the neighborhood fell to suburban strip development. Their houses, of which three survive on site and another offsite, and their agricultural fields, have a high potential for providing information about ethnicity, agricultural history, and nineteenth-century land reclamation strategies, in an ethnic context. The potential research value of the site is enhanced by the fact that no other group of people are known to have cultivated it, and some fields have not been touched since the moor families left. Even where intrusive suburban lots have been cut out of the property, large areas may be expected to contain archaeological evidence for agricultural and horticultural practices. Comparison of such agricultural evidence with fields cultivated by other social and cultural groups may help to define these people culturally in terms of farming practice, gentrification, and educational level.

Remaining buildings are significant for their association with the moor community. Limited data currently available suggests that survival of a conservative dwelling type, including external kitchens and extensive attached porches, may be a characteristic of moor housing preferences. However, these are the only documented examples of this type, and represent only a limited period of construction. More extensive survey might refine this property type. Essential to development of a moor property type will be a definition of associated agricultural remains.

Background history

The community came into being in 1884 when Jacob Mosley bought a 36-acre tract from Samuel Pleasanton Mifflin. Within the next few years, Mosley sold off parts of the tract to other members of the moor community. In short order, a row of seven small two-story farmhouses stood along the road and the former wasteland had been put under the plow through clearance and drainage.

The community remained stable for nearly three-quarters of a century. Houses were occupied by two or more generations, and the small farms provided subsistence or supplemental food and income. With the passing of the second generation, the properties again fell into the hands of younger family members who were absentee owners. These heirs sold off their portions as building lots, creating the present infill of modern houses and mobile homes that now line the road. Eventually the older houses were abandoned as McKee Road became a suburban street consumed by the Dover urban sprawl.

Integrity

Of the seven original moor tofts, the original houses still stand on two. One house has been moved and preserved in a museum offsite. One house on the site was moved in during the period of significance, and therefore contributes even though it is architecturally dissimilar to the others. Sites of the four missing houses are preserved. One of these was tested and found to contain significant intact archaeological

deposits. From superficial examination it appears that the site of another removed house probably is archaeologically intact; it was unavailable for testing because a lawn covers it.

All major features of the agricultural fields remain visible. Farm tracts, which are contiguous across the back of the district, retain all the outward signs of agricultural activity.

FRAZIER CARNEY TOFT

Frazier Carney (1883-1946), built the house that still stands in poor condition (K-6692). When he died, the farm contained 22 acres. Frazier Carney's parents, William Morris Carney and Sallie Carney, lived next door. He obtained the house site by purchase and later added land inherited from his parents, including the farm field that still separates the two sites.

This house is larger and more elegant than the others, but it shares the separate kitchen that characterize the other houses in the group. It is the only one of the group that still has its farm buildings. The plan is L-shaped with a broad verandah on two sides.

WILLIAM MORRIS CARNEY TOFT

North of the Frazier Carney house was the lot Isaac Mosley conveyed to Sallie Carney in 1885, part of the ten acres he had bought from Jacob Mosley the year before. The house she built with her second husband, William Morris Carney, (K-6691) is now at the Delaware Agricultural Museum.

ROBERT CARNEY LOT

A row of modern houses now occupy the five-acre lot that Jacob Mosley sold to Robert Carney in 1884, part of the original subdivision. Within living memory this lot contained an old house, south of the Mosley-Bratcher house and north of the William Morris Carney house. Since the modern houses have been built to the rear of the original houses, there is a very high probability that the Robert Carney toft site has not been archaeologically compromised. The survival of a large yard tree at apparent original grade may be taken as evidence that major ground disturbance has not occurred. Integrity is therefore likely to be good.

MOSLEY-BRATCHER HOUSE SITE

In 1888, Jacob Mosley conveyed three acres to Lucinda Mosley, wife of his son David. On this three-acre tract stood a house (K-6690) that probably was built soon thereafter. David and Lucinda added to their holdings. In 1900 they bought 19 acres of the Pleasanton estate from Florence Creadick, a widow whose husband had bought it for investment.

David eventually controlled about 40 acres in the community on the west side of McKee Road. Between 1911 and 1915, he also owned the part of the adjacent Geiser farm. In 1919 David and Lucinda conveyed the remainder of the home farm to Herbert Harmon of Philadelphia. The Harmons added to the holding by purchasing yet another tract to the west. The Harmons held the property forty years, until 1950, when they sold it to Albert and Emma Bratcher, who resided there for many years. It was destroyed in 1993.

LEON CORNEY HOUSE

The two-bay, two-story Leon Corney house (K-1060) is one of three surviving similar houses built by the first generation settlers along the road. The property was conveyed in 1938 to the bank by Clody and Estella Pritchett. The Pritchetts had obtained the tract from David and Lucinda Mosley in 1910. At that time it was 16 acres, the residue of the original Jacob Mosley farm. This may be the Jacob Mosley house. Leon Corney, or Carney (1898-1973) bought 13 acres from the First National Bank of Dover in 1939.

MARTHA JOHNSON LOT

Next south from Levi Mosley's tract is a triangular half acre Jacob Mosley sold to Martha Johnson, wife of Burton Johnson, in 1885. She was a widow in 1906 when she sold it to Walter H. Carney. He

held it until 1937, when he sold it to Frank Hall Pritchett, who conveyed it to Paul Smith, the present occupant, in 1955. The property has a history of lifetime owner-occupancy unrivalled in the neighborhood. The present one-story frame house (K-1059) is said to be an old school moved more than fifty years ago, after the earlier house burned. Whatever the history of the house, the toft has undergone considerable renovation during the century since it was established.

Aside from superficial changes to the appearance of the house, there is no evidence that the subsurface features of the toft have been compromised. The general form of the original building has not changed, according to old residents.

LEVI MOSLEY PROPERTY

Between 1896 and 1903, Levi Mosley bought three parcels, totalling twelve acres, from Geiser, adjoining the land Jacob Mosley had bought from the Pleasanton heirs. The two-story house on that parcel (K-6689) is larger than most of the neighbors', and has been altered. An unusual floor plan, with the hip-roofed gable in the front, sets this apart from the local folk architectural genre.

9. Major Bibliographical References

Ames, David L., Mary Helen Callahan, Bernard L. Herman, and Rebecca J. Siders
1989 *Delaware Comprehensive Historic Preservation Plan.*

Custer, Jay
1986 A management plan for Delaware's Prehistoric Cultural Resources. *University of Delaware Center for Archaeological Research Monograph No. 2.*

Heite, Edward F., and Cara Lee Blume
1992 *Archaeological and Historical Discoveries in Connection with Scarborough Road.* Delaware Department of Transportation Archaeology Series 91. Dover.

Herman, Bernard L., and Rebecca J. Siders
1986 *Delaware Comprehensive Historic Preservation Plan: Historic Contexts.*

10. Geographical Data

Acreage of Property: 95±

Verbal Boundary Description

Bounded on the northeast by McKee Road, on the Northwest by The Meadows subdivision, on the southwest and northwest by the Fox Hall subdivision, and on the southeast by lands now or formerly of McKee.

Boundary Justification

These boundaries contain all the land the subject group bought and farmed during the period of significance.

Evidence for contiguity in the agricultural portions of the property was obtained by observation of topographic and natural features, observation of land alterations, and study of historical documents.

Portions of the district have been separated by intervening development, but the visually separated portions are contiguous and all the visually separated parts have sufficient significance and integrity to meet National Register criteria. Visual continuity is a minor factor in significance.

11. Form Prepared By

Edward F. Heite
Heite Consulting
P. O. Box 53,
Camden, DE 19934

December 1992
302-697-1789

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1. Name of Property

historic name Nathan Williams House Site
other names/site number K-6454, 7K-C-389

2. Location

street & number East side of McKee Rd. north of College Road
city or town Dover vicinity
state Delaware code DE county Kent code 001 zip code 19901

5. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
private	site	Contributing 1	Noncontributing site total
		1	

6. Function or Use

Historic Functions

AGRICULTURE/ agricultural field
DOMESTIC/single dwelling

Current Functions

AGRICULTURE/ agricultural field

7. Description

Narrative Description:

Much of the original eleven-acre Williams holding is now a cultivated field bounded on the west by McKee Road and on the east by a wooded wetland. On the north it is bounded by the present farm driveway. The original tract extended west of the present McKee Road and south to include the property now the separate five-acre home lot of Anita Baynard, one of the owners of the farm.

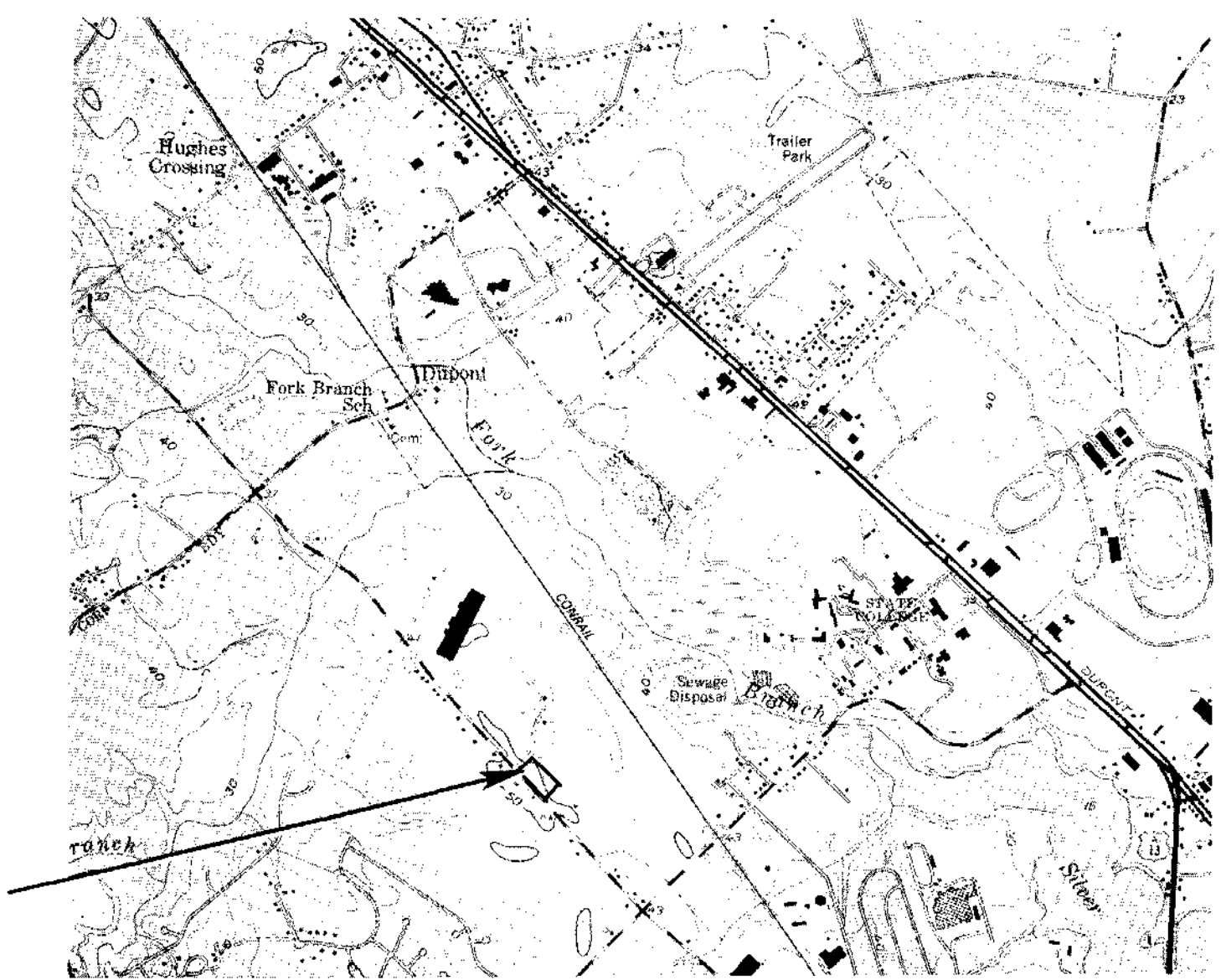
In 1838, this tract of about 11 acres was described as late in the tenure of Williams, who was described as a Free Negro. No precise boundaries were given, and the origin of Williams' tenure was not described. Clearly during the lifetime of Nathan Williams, the term "tenant" is inapplicable; later the tract was occupied by agricultural tenants.

From the descriptions in nineteenth-century documents, the Williams house was a modest affair, possibly one of the log houses identified in earlier documents. Whatever the material, such houses can be expected to leave little structural remains. A nineteenth-century trash deposit was identified on the approximate site of the documented Williams toft, indicating that some archaeological deposits probably survive below plow depth.

During tests in the spring of 1992, a controlled surface collection in the newly-cultivated field produced an approximate boundary for the site. This approximation was confirmed when a Gradall trench uncovered buried features in precisely the same area as the artifact concentration. Because the Gradall trench through a standing crop was by necessity relatively narrow, features could not be fully uncovered and interpreted.

Features included a linear feature that may have been a sill mold or planting bed, a square postmold, and an amorphous pit. In such a narrow trench, it was impossible to interpret these features, but all are consistent with domestic activities. The features were concentrated in the same area that was the center of the surface artifact concentration. Analysis of soil chemical residues likewise indicated the presence of a site in this spot.

The artifact collection consisted to two temporal clusters. Early materials, including white saltglaze stoneware and free-blown beverage bottles, indicate an occupation during the eighteenth century or the early nineteenth century. Later materials, which were more abundant, included refined white earthenware and bottles, were consistent with occupation around the middle of the nineteenth century.



Detail of USGS Dover 7.5 minute quadrangle



Location of the Nathan Williams House Site, 7K-C-389

Site boundaries are marked with a solid line

8. Statement of Significance

Applicable National Register Criteria

- D Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance

Agriculture
Archeology / Historic, non-aboriginal

Period of Significance

1804-1881

Cultural Affiliation

African-American

Narrative Statement of Significance

This site derives much of its significance from the fact that it was occupied by a poorly-documented class of landholder. Sites associated with antebellum free black non-landowners are extremely difficult to identify, since there was no legal compulsion to make a record of their tenure. Free black landowners have received considerable attention in the historical literature because they are readily identified in the tax rolls and deeds.

The state management plan for historical archaeological sites does not single out the antebellum free black population for study, but identifies dislocations caused by Civil War as an appropriate area for study. Since the Nathan Williams property spans the Civil War period, excavation could shed light on the social transformations that occurred.

The Nathan Williams property was first identified in the records by the will of John Pleasanton in 1838. At that time, the property consisted of approximately eleven acres with a house. It cannot be determined if this was one of the houses identified in earlier documents. Williams was a free Negro with some rights to the property that were less than freehold, perhaps a life estate.

When the present McKee Road was laid out in 1881, a house still stood on the site. It is possible from the documents to identify the Williams holding, roughly congruent with a field that still exists in the farm.

Artifact collections suggest that the site was created over a long period, which is consistent with the documentary evidence for at least a fifty-year occupation.

The open field that includes this site is a contributing part of the setting of the Scotten-Ford agricultural complex. Since the Nathan Williams occupation predated all the features now visible on the property, it does not contribute to the significance of that property.

9. Major Bibliographical References

Ames, David L., Mary Helen Callahan, Bernard L. Herman, and Rebecca J. Siders
1989 *Delaware Comprehensive Historic Preservation Plan.*

Custer, Jay
1986 *A management plan for Delaware's Prehistoric Cultural Resources, University of Delaware Center for Archaeological Research Monograph No. 2.*

Heite, Edward F., and Cara Lee Blume
1992 *Archaeological and Historical Discoveries in Connection with Scarborough Road.* Delaware Department of Transportation Archaeology Series 91. Dover.

Herman, Bernard L., and Rebecca J. Siders
1986 *Delaware Comprehensive Historic Preservation Plan: Historic Contexts.*

10. Geographical Data

Acreage of Property: less than one

Verbal Boundary Description The site is bounded on the west by McKee Road and is about thirty meters square, centered on a point fifty meters south of the Ford Farm driveway. On the east the site boundary is a field edge about 250 feet from the road.

Kent County property tax tract numbers ED 67.00 - 01 -02 and ED 67.00 - 01 - 01

Boundary Justification

The boundary coincides with surface collections and subsurface discoveries. During 1992 archaeological testing, features were found in a Gradall cut across the known site. These features were concentrated about the point 50 meters southward from the farm drive. Controlled surface collection confirmed the size and extent of surface indications. This size is consistent with the sizes of tofts of tenant houses in Delaware. The eastern boundary is the limit of the property Nathan Williams controlled.

11. Form Prepared By

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APPENDIX 5: EXCAVATION REGISTER

ISLAND FIELD MUSEUM ACCESSION NUMBER: 90/23/ ...
ALL SITES ARE LOCATED ON THE DOVER USGS 7.5' QUADRANGLE AND SPO MAP 10-11-22

REGISTER OF THE NATHAN WILLIAMS SITE

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3	Nathan Williams House Site K-6454 7K-C-389	Surface collection from a house site immediately adjacent to McKee Road on the Ford Farm. SaB	<p>1 sherd white porcelain 1 piece dark green bottle 3 pieces bluish clear bottle 1 piece clear bottle 1 milk glass jar lid liner 1 sherd blue decorated grey stoneware 1 sherd red earthenware dark glaze in & out 1 sherd red earthenware glazed one side 1 rimsherd blue edge decorated pearl body 11 sherds other white earthenware</p> <p>1992 surface collection: oyster shell fragments handmade brick fragments commercial brick fragments mortar lumps with cinder inclusions roofing slate coal/cinders 2 joining pieces late 18th C. dark green bottle base 1 dark green glass cast bottle rim 2 dark green glass bottle body sherds 1 green blown glass pharmaceutical bottle base fragment, with a very high kickup (possibly late 17th C.) 1 fine white saltglazed stoneware sherd 2 slip-decorated redware sherds 1 aqua glass bottle rim 1 heavy aqua glass bottle base 1 thin aqua glass bottle base 1 aqua glass bottle base with slight kickup, possibly burned 2 plain aqua glass bottle body sherds 1 embossed aqua glass bottle body sherd, letters CI 1 aqua glass fragment with a pebbly (abraded) surface, probably from a vessel 1 small aqua window glass fragment 1 small clear window glass fragment 1 pale green bottle glass body sherd</p>

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3, continued			<p>1 embossed green glass bottle body sherd, letters . .HILA. .</p> <p>1 brown bottle glass body fragment</p> <p>1 bright green bottle glass body fragment</p> <p>1 amethyst pharmaceutical bottle neck and rim</p> <p>1 amethyst bottle neck with neck ring</p> <p>1 amethyst interior fluted tumbler base and side</p> <p>1 amethyst tumbler base with moulded base</p> <p>1 clear glass faceted tumbler body sherd</p> <p>1 thick clear glass faceted tumbler body sherd</p> <p>1 clear machine-made tumbler sherd</p> <p>2 plain pearlware body sherds</p> <p>2 plain pearlware foot ring sherds</p> <p>2 early blue shell-edged pearlware</p> <p>2 later blue shell-edged pearlware</p> <p>2 banded pearlware sherds, probably from the same vessel</p> <p>2 handpainted blue pearlware body sherds</p> <p>1 transferprinted pearlware body sherd</p> <p>1 other blue decorated pearlware body sherd</p> <p>1 American grey salt-glazed stoneware with Albany slip interior</p> <p>1 American grey salt-glazed stoneware sherd, possibly from a spout</p> <p>9 CC body sherds</p> <p>2 CC rim sherds</p> <p>11 ironstone body sherds</p> <p>3 ironstone basal sherds with foot rings</p> <p>1 ironstone lid sherd</p> <p>4 ironstone rim sherds</p> <p>3 handpainted refined ware rim sherds</p> <p>1 handpainted refined ware body sherd</p> <p>1 multi-color sponge decorated body sherd</p> <p>1 pale blue banded rim sherd</p> <p>1 green banded body sherd</p> <p>2 light blue transfer printed sherds</p> <p>1 black transfer printed porcelain rim sherd</p> <p>3 plain white porcelain rim sherds</p> <p>1 thick porcelain body sherd</p> <p>3 lead-glazed redware body sherds</p> <p>1 lead-glazed redware rim sherd</p> <p>2 unglazed redware rim sherds (probably flowerpots)</p> <p>13 black glazed redware body sherds</p> <p>1 black glazed redware basal sherd</p> <p>1 black glazed redware rim sherds</p> <p>7 redware sherds with one or more surfaces missing</p> <p>2 flat iron fragments</p> <p>1 quartz chunks</p> <p>1 fire-cracked rock fragment</p>

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
3a	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A tight pattern of crescent-shaped marks in the top of the yellow subsoil, apparently resulting from impacts inflicted by a round shovel, associated with a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3b	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. Linear feature, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	2 pieces coal/cinder 2 sherds red-bodied earthenware with surfaces missing
3c	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A rootmold found within deposit 3d, a posthole, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3d	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A posthole, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3e	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. A square postmold, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	
3f	Nathan Williams House Site K-6454 7K-C-389	Feature uncovered during machine-stripping, May 1992. An amorphous shallow pit, part of a house site immediately adjacent to McKee Road on the Ford Farm. SaB	1 sherd white refined earthenware
189	Nathan Williams House Site K-6454 7K-C-389	Surface collection on the field north of the driveway into the Medford Ford farm. This area was part of the Nathan Williams property, and was wooded until the present century.	No artifacts were retained

REGISTER OF THE FORD FARM SITE, LOCUS E

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
190	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 20 cm. below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	1 quartz chunk 2 fire-cracked rock fragments
190a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 20 to 30 cm. below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	No artifacts
190b	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 30 to 40 cm., below the surface, of a 1 meter test unit between 10 and 11 meters on a traverse across new right-of-way. SaB	No artifacts
191	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 25 below the surface of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	1 pebble 2 heat-reddened pebbles 1 quartz non-cortex flake, 24 mm. 1 chert non-cortex flake, 26 mm. 1 fire-cracked rock fragment
191a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 25 cm. to 40 cm. below the surface of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	No artifacts
192	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 30 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	1 heat-reddened pebble 1 Dames Quarter body sherd 1 chert non-cortex flake, 26 mm. 1 pebble core 4 fire-cracked rock fragments
192a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 30 to 35 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	2 nails 1 whiteware sherd 1 quartz non-cortex flake, 18 mm. 1 fire-cracked rock fragment
192c	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 35 to 45 cm. below the surface, of a 1 meter test unit between 30 and 31 meters on the east side of a traverse across new right of way. EsB	No artifacts
193	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 25 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 slate fragment 1 heat-fractured pebble fragment 1 jasper cortex flake, 14 mm.

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
193a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 25 to 40 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 jasper cortex flake, 25 mm. 1 chert core fragment 1 fire-cracked rock fragment
193e	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 3, 40 to 60 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	5 pebbles 1 broken jasper side-scraper
193i	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 4, 60 to 75 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	2 heat-fractured pebble fragments 1 quartzite cortex flake, 32 mm. 1 quartz core
193m	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 5, 75 to 85 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 pebble 1 fire-cracked rock fragment
193q	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 6, 85 to 95 cm. below the surface, of a 1 meter test unit located near the dirt bike track in the woods, near the Ford line. EsB	1 pebble
194	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 15 cm. below the surface, of a 1 meter test unit located between 20 and 21 meters on the second traverse.	3 heat-reddened pebbles
195	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 1, 0 to 20 cm. below the surface, of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 oyster shell fragment 1 piece coal 1 heat-reddened pebble 1 jasper non-cortex flake, 22 mm. 1 thick jasper non-cortex flake, 25 mm. 1 chunk granular quartz with mica inclusions, possibly fire-cracked
195a	Ford Farm Prehistoric Site K-6451 7K-C-386 Locus E	Level 2, 20 to 45 cm. below the surface, of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	2 oyster shell fragments 1 heat-reddened pebble 1 quartz chunk 1 chert chunk 1 jasper cortex flake, 14 mm. 1 fire-cracked rock fragment, possibly used as a grinding stone

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
195c	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 3, 45 to 70 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 heat-reddened pebble 1 chert non-cortex flake, 15 mm. 1 jasper cortex flake, 18 mm. 1 jasper small-stemmed point (recovered from bottom of level) 3 fire-cracked rock fragments
195i	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 4, 70 to 95 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	1 large piece of a grinding stone
195m	Ford Farm Prehistoric Site K-6451 7K-C-386	Level 5, 95 to 115 cm. below the surface of a 1 meter test unit located at the triangulation point near the bank in the first traverse area. EsB	No artifacts
198	Ford Farm Prehistoric Site K-6451 7K-C-386	Artifact found in dirt bike track by Daniel Griffith, 4/3/92	1 crude quartz biface

REGISTER OF THE WILLIAM MORRIS CARNEY SITE

<i>Excavation Register Number</i>	<i>Site Name, CRS Number and Site Number</i>	<i>Description of the unit and soil type symbol</i>	<i>List of Artifacts Recovered</i>
196	William Morris Carney house site 7K C 408	Topsoil level of test 1, a meter-square unit in the kitchen area of the former William Morris Carney toft site. SaB	clam shells asbestos siding 1 piece clear window glass 1 sherd refined white earthenware
197	William Morris Carney house site 7K C 408	Topsoil level of test 2, a meter-square unit in the kitchen area of the former William Morris Carney toft site. SaB	clam shells asbestos siding sherds representing about one third of an undecorated ironstone dinner plate marked "Mellor." sherds representing about one half of an undecorated refined white earthenware dinner plate. sherds representing about one half of a refined white earthenware dinner plate decorated with underglaze flower pattern and overglaze gilt decoration, marked "Salem China Co. Ohio" refined white earthenware teacup handle 2 sherds black-printed white refined earthenware sherds representing part of the bottom of a transfer-printed white earthenware saucer. dark brown glazed red earthenware 3 sherds clear vessel glass 6 sherds clear window glass base of a free-blown cloudy white glass vessel milk glass lid liner aluminum tab top nails pieces of a cast-iron object

PROFESSIONAL QUALIFICATIONS

Heite Consulting, a firm consisting of Dr. Louise Heite and Edward F. Heite, specializes almost exclusively in reconnaissance-level and phase I cultural resource management studies. Rather than attempt large projects, the principals concentrate upon projects that they can execute themselves, without assistants. Project sponsors are therefore assured that each investigation receives the full attention of a qualified senior researcher.

Edward Heite served as Historic Registrar and Chief of the Bureau of Archives and Records Management for the State of Delaware. His assignments with the state included the statewide survey of historic sites and the restoration of the Old State House at Dover. He was previously archaeological historian for the Virginia Historic Landmarks Commission, for whom he directed the excavation of eighteenth-century Fredericksville Furnace and the seventeenth-century Hallowes site in Virginia. He recently completed the salvage excavation of a nineteenth-century cannery site for the Delaware Department of Transportation. He is currently principal investigator for the Department's excavation of a deeply-stratified Paleo-Indian site in Kent County.

During the summer of 1989, both worked as archaeologists and artifact analysts for the City of Reykjavík, Iceland. Dr. Louise Heite is currently working in Iceland, where she has completed a study of medieval wool textiles.

Ms. Cara Lee Blume, a doctoral candidate at the Catholic University with more than twenty years' experience in Delaware prehistory, is consultant to the firm. She is currently preparing her dissertation on the prehistory of Sussex County. Her master's thesis concerned historical archaeology at the Delaware State House.

Since 1980, the firm has completed reconnaissance-level studies and phase I studies for the Philadelphia District, United States Army Corps of Engineers, National Park Service, United States Navy, Waste Management of North America, BCM Eastern, Inc., the Trustees of the New Castle Common, and the Delaware Department of Transportation. A list of projects and clients is available upon request.

Current or recent projects include the Scarborough Road project for Delaware Department of Transportation; the Little Mill / Red Clay Interceptor project with Tatman and Lee for New Castle County; a proposed wastewater treatment plant for Berlin, Maryland; and a phase I survey for the National Park Service at Assateague National Seashore, Maryland.

CERTIFICATIONS

The firm is listed in the Virginia, Delaware, Maryland, and Pennsylvania SHPO lists of Cultural Resource Management consultants.

Both principals of the firm are members of the Society of Professional Archaeologists, certified in theoretical/archival research, document research, and historical archaeology. Ms. Blume also has been certified by SOPA. Edward Heite is also certified by SOPA in field research and cultural resource management. They meet the professional standards for both historians and archaeologists set forth in 36 CFR Part 61 and 43 CFR Part 7 (1984) and in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation. Edward Heite also satisfies the requirements for an architectural historian (*Federal Register* Thursday, September 29, 1983, pages 44738-44740).